THE ONTARIO STUDENT RECORD AND THE RECORD-KEEPING RAMIFICATIONS OF BILL 82

EDWARD H. HUMPHREYS
IAIN F.W.K.DAVIDSON
JAMES D.FEENEY

LAURA S. WEINTRAUB
PHILIP A. MANUEL

This research was funded under contract by the Ministry of Education, Ontario.
It reflects the views of the author and not necessarily those of the Ministry.

The Honourable Sean Conway, Minister

Ontario

86-04448/

THE ONTARIO STUDENT RECORD AND THE RECORD-KEEPING RAMIFICATIONS OF BILL 82

EDWARD H. HUMPHREYS
IAIN F.W.K.DAVIDSON
JAMES D.FEENEY
LAURA S. WEINTRAUB
PHILIP A. MANUEL

Conducted in The Department of Educational Administration of
The Ontario Institute for Studies in Education.

This research was funded under contract by
the Ministry of Education, Ontario.

It reflects the views of the author and
not necessarily those of the Ministry.

The Honourable Sean Conway, Minister

© QUEEN'S PRINTER FOR ONTARIO, 1986

Order Information:

Publications Sales
The Ontario Institute
for Studies in Education
252 Bloor Street West
Toronto, Ontario M5S 1V6
(416) 926-4707
Will invoice on orders over $30.00.
Other orders must be accompanied by a
cheque or money order payable to
O.I.S.E.

Publications Services
880 Bay Street, 5th Floor
Toronto, Ontario M7A 1N8

(416) 965-6015
(Toll Free) 1-800-268-7540
(Toll Free from area code 807)
Ask operator for Zenith 67200
Order must be accompanied by a cheque
or money order payable to the
Treasurer of Ontario

ONO 2666

Canadian Cataloguing in Publication Data

Main entry under title:

The Ontario student record and the record-keeping
ramifications of bill 82

Co-published by Ministry of Colleges and Universities.
Bibliography: p.
ISBN 0-7729-0551-7

1. Personnel records in education--Data processing.
2. Schools--Records and correspondence--Data processing. I. Humphreys, Edward H., 1932- . II. Ontario. Ministry of Education. III. Ontario. Ministry of Colleges and Universities.

LB2846.O57 1985 371.2'07'0285 C85-093026-X

ACKNOWLEDGEMENTS

This document represents the seventh and final report of a study of the management of student information in Ontario. The study was conducted under a contract between the Ministry of Education (Ontario) and the Ontario Institute for Studies in Education. The study team wishes to thank the ministry for their support, the assistance of their officials, and their forbearance in awaiting this final report.

No study of this kind could be conducted without the assistance of the personnel in the eighteen systems from which the data were collected. We appreciate the active interest and involvement of the many teachers, administrators and other professionals, students, and parents who assisted us and/or from whom we collected data by questionnaires or interviews. We thank you for your time, your candid responses, and your many suggestions.

The opportunity to consult on an informal basis with advocates and professionals who represent children and/or provide children's services was essential to our work. The insights provided during these consultations were invaluable.

To name each of those who made a significant contribution to our work would require a further volume. We do wish, however, to especially acknowledge the assistance of Mr. Hugh Kelly, Q.C., of Day, Wilson and Campbell (Toronto), whose patience in guiding our learning about the law was vital to our success. While we may not have always accepted his advice, we knew upon what basis it was given and the implications of taking another route. We thank him for both his thoroughness and his gracious presentations.

To all of these, we offer our thanks. We hope our work honours their contribution.

Table of Contents

ACKNOWLEDGEMENTS i
SUMMARY OF RECOMMENDATIONS ix
- I. INTRODUCTION ix
- II. THE STUDENT INFORMATION SYSTEM (SIS) AND ITS NETWORK ix
- III. THE PURPOSE OF THE RECORD x
- IV. DEFINITION OF THE SIS x
  - A. Name and Scope x
  - B. The Attendance Record x
  - C. Professionals' Notes xi
  - D. Access by Professionals xi
  - E. Logs and Restriction xi
  - F. Dating and Review xi
  - G. The Health Card xii
  - H. The Documentation File xii
  - I. Location and Guidelines xii
- V. LEGAL-ETHICAL CONSIDERATION xii
  - A. Consent xii
  - B. Access xiii
  - C. Security xiv
  - D. Informing xiv
- VI. LEGISLATION, POLICY AND OPERATING PROCEDURES xv
  - A. Informational Attributes xv
  - B. Systemic Functions xv
  - C. Legal-Ethical Considerations xvi
  - D. Training and Monitoring xvi
- VII. MANAGEMENT AND CONTROL OF THE STUDENT INFORMATION SYSTEM xvi
  - A. Provincial Legislation xvi
  - B. Provincial Regulations xviii
  - C. School Board Policies xx
  - D. School Board Operating Procedures xxii

CHAPTER ONE: INTRODUCTION 1
- I. STUDENT INFORMATION IN ONTARIO 1
- II. ORIGINS OF THIS STUDY 1
- III. ASSUMPTIONS 2
- IV. STUDY FRAMEWORK AND TASKS 3
- V. ORGANIZATION OF THE FINAL REPORT 5

CHAPTER TWO: CRITERIA FOR EFFECTIVE INFORMATION SYSTEM MANAGEMENT 8
- I. INTRODUCTION 8
- II. LITERATURE REVIEW 8
  - A. Student Information 8
  - B. Management and Information Systems 9
- III. THE CONCEPTUAL MODEL AND GENERIC ATTRIBUTES 12
  - A. The Informational Dimension 14

- B. The Systemic Dimension 14
- C. The Legal-Ethical Dimension 14
- D. Criteria of Effectiveness 15
- E. Intersecting Attributes 15
  - Intersecting Systemic and Informational Attributes 15
  - Intersecting Systemic and Legal-Ethical Attributes 16
  - Intersecting Informational and Legal-Ethical Attributes 17
- IV. CONCLUSION 17

CHAPTER THREE: INFORMATION NEEDS IN DECISION-MAKING 18

- I. INTRODUCTION 18
- II. THE DECISION-MAKING PROCESS 19
- A. Operational Decisions 19
  - A Model of Decision-Making at the Classroom Level 20
  - A Model of Decision-Making at the School Level 28
  - A Model of Decision-Making at the Board Level 31
- B. Metasystemic Decisions 35
  - Data Needs at the Classroom Level 35
  - Data Needs at the School Level 35
  - Data Needs at the Board Level 36
- C. Flow of Information in a Recursive System 36
- III. TYPES OF STUDENT INFORMATION REQUIRED 38
- IV. CONCLUSION 39

CHAPTER FOUR: PURPOSE OF A STUDENT INFORMATION SYSTEM 41

- I. INTRODUCTION 41
- II. USERS AND TYPES OF STUDENT INFORMATION 41
  - A. Users 41
  - B. Types of Information 43
  - C. The Student Information System (SIS) 45
- III. THE PURPOSE IN RELATION TO RECENT LEGISLATION 46
  - A. Current Definitions of Pupil Records 48
  - B. Implications of Amendments to the Education Act (1974) 48
  - C. Additional Implications 50
- IV. THE PURPOSE: IMPROVING INSTRUCTION 51
- V. MULTIPLE RECORDS 53
  - A. The Attendance File 53
  - B. Professionals' Notes 54
- VI. THE FORMAT AND CONTENTS OF THE RECORD 60
  - A. New Format 60
  - B. The Health Card 61
  - C. The Documentation File 63
- VII. RESPONSIBILITY FOR THE OSR IN THE SCHOOL 64
- VIII. SUMMARY 66

CHAPTER FIVE: LEGAL-ETHICAL CONSIDERATIONS 68

- I. INTRODUCTION 68
- II. SOURCES 69
- III. CONSENT 71
  - A. Definitions 71
  - B. Analysis of Current Requirements 72
  - C. Summary 75
- IV. ACCESS 75
  - A. Definitions 75
  - B. Analysis of Current Requirements 76

    C. Summary 80
  V. SECURITY 80
    A. Definitions 81
    B. Analysis of Current Requirements 81
    C. Summary 86
  VI. INFORMING 86
    A. Definitions 86
    B. Analysis of Current Requirements 87
    C. Summary 89

CHAPTER SIX: PRESENT USE OF STUDENT INFORMATION 90

  I. INTRODUCTION 90
  II. METHODOLOGY: ENTRY TO SCHOOL SYSTEMS AND SCHOOLS 91
  III. METHODOLOGY: INSTRUMENTATION 91
    A. Document Analysis 92
    B. Interview Schedule 92
    C. Questionnaire Survey 92
    D. Survey of Ontario Student Records 93
    E. General Considerations 93
  IV. METHODOLOGY: SAMPLE 93
  V. RESULTS: DATA AND ANALYSIS 94
    A. Introduction 94
    B. School Questionnaires/Interviews 94
    C. Central Office Questionnaires/Interviews 100
    D. Parent and Student Interviews 124
    E. OSR Content Analysis 125
  VI. DISCUSSION AND CONCLUSION 128

CHAPTER SEVEN: CURRENT NEEDS OF STUDENT INFORMATION SYSTEMS IN ONTARIO 140

  I. INTRODUCTION 140
    A. Origins 140
    B. The Model 140
    C. Summary of Assumptions 140
  II. IDENTIFIED NEEDS 141
    A. A Student Information System 141
    B. Structural Elements 142
    C. The Network 144
    D. Information 145
    E. Processing of Information 147
    F. Legal-Ethical Considerations 148
    G. Development of the Proposed SIS 150
  III. POSTSCRIPT 150

CHAPTER EIGHT: A MODEL STUDENT INFORMATION SYSTEM 152

  I. INTRODUCTION 152
  II. THE ELEMENTS OF THE STUDENT INFORMATION SYSTEM (SIS) 152
    A. Overview 152
    B. Office Index Card 153
  C. The Ontario Student Record Folder (OSR) 153
    D. Inclusions in the OSR Folder 154
    E. School Health Card 155
    F. Attendance File 156
    G. The Documentation File 156
    H. Professionals' Notes 157
  III. THE NETWORK 158

A. The Purposes of the Network 158
B. The Characteristics Needed to Achieve the Purposes 159
  Historical Uses 159
  Operational Uses 159
  Metasystemic Uses 160
C. The Medium of Storage 160
  Paper 161
  Microfilm 161
  Electronic 162
D. The Model SIS 163
  An integration of paper and electronic media 163
  Long-term retention 164
  Files with specialized uses 165
  Central board uses 165
  The documentation file: A special case 166
IV. GOVERNANCE OF THE SIS 167
A. Provincial Legislation 168
B. Provincial Regulations 169
C. School Board Policies 171
D. School Board Operating Procedures 173
  Conclusion 176
References 177
Appendices 182

List of Figures

Figure 1: Conceptual Model of the Intersection of Informational, System, and Legal-Ethical Attributes of Student Information Systems 13
Figure 2: Model of Decision-Making at the Classroom Level 21
Figure 3: Model of Decision-Making at the School Level 22
Figure 4: Model of Decision-Making at the Board Level 23
Figure 5: Flow of Information Within a Recursive Decision Process 37

List of Tables

Table 1: List of Terms Used in the Decision-Making Models 24
Table 2: Location, Medium, and Access Point of Data Retained in the Student Information System 47
Table 3: Functions Carried out by School and Central Administrative Personnel 95
Table 4: Types of Information Reported as Important for Each Function: School Questionnaire 97
Table 5: Respondents' Reports of the Times at Which Information was Collected by Function: School Questionnaire 98
Table 6: Respondents' Reports of the People from Whom Information was Collected for Different Functions: School Questionnaire 99
Table 7: Documents from Which Information was Obtained for Each Function: School Questionnaire 101
Table 8: Places in Which Documents were Retained: School Questionnaire 102
Table 9: Places in Which Documents were Stored: School Questionnaire 103
Table 10: Respondents' Reports of Times at Which Information was Shared: School Questionnaire 104
Table 11: Ways in Which Information was Shared: School Questionnaire 105
Table 12: Types of Information Reported as Most Important for Each Function: Central Office Questionnaire 106
Table 13: Respondents' Reports of Times at Which Information was Collected by Function: Central Office Questionnaire 107
Table 14: Respondents' Reports of the People from Whom Information was Collected for Different Functions: Central Office Questionnaire 108
Table 15: Documents from Which Information was Obtained for Each Function: Central Office Questionnaire 109
Table 16: Places in Which Documents were Retained: Central Office Questionnaire 110
Table 17: Places in Which Documents were Stored: Central Office Questionnaire 111
Table 18: Respondents' Reports of the Times at Which Information was Shared: Central Office Questionnaire 112
Table 19: Ways in which Information was Shared: Central Office Questionnaire 113
Table 20: Number and Percentages of Respondents Stating that Consent was Obtained from Parents or Students Before Collecting, Storing, or Sharing Data 114
Table 21: Percentage of Respondents Reporting Different Methods of Obtaining Consent 114
Table 22: Numbers and Percentages of Respondents Reporting Whether Consent was Obtained 115
Table 23: Types of Person with Access to Student Data in OSR Files: School Questionnaire 117
Table 24: Types of Person with Access to Student Data in OSR Files: Central Office Questionnaire 118
Table 25: Types of Person with Access to Student Data in Personal Files: School Questionnaire 119
Table 26: Types of Person with Access to Student Data in Personal Files: Central Office Questionnaire 120
Table 27: How Access to OSR Files was Controlled: School Questionnaire 121

Table 28: How Access to Personal Files was Controlled: Central Office Questionnaire 122
Table 29: How Accidental Release of Data was Prevented: School Questionnaire 123
Table 30: Parents' and Students' Reports of the Sources from Which They Learned that Student Records were Kept 124
Table 31: Percentages of Parents and Students who Reported that the School Board had Approached them for Permission for Various Requests 125
Table 32: Parents' and Students' Reports of the Sources from Which They Learned that They had Access to the OSR 126
Table 33: Parents' and Students Reports of the Types of Person They Believed May Have Access to the OSR Without Written Consent 127
Table 34: Parents' and Students' Reports of the Sources from Which They Learned Who May Have Access to the OSR Without Written Permission 128
Table 35: Parents' and Students' Reports of the Reasons for Which They Had Applied to See OSR Files 129
Table 36: Parents' and Students' Reports of the Sources from Which They Learned that the Information May Be Removed from the OSR 130
Table 37: Types of Information Parents and Students Believed To Be in the OSR 130
Table 38: Parents' and Students' Suggestions of Additional Types of Information Schools Should Collect 131
Table 39: Percentages of OSR Files Containing Different Types of Identification Information 132
Table 40: Percentages of OSR Files (Outside Section) Containing Different Types of Family Information 133
Table 41: Percentages of OSR Files Containing Different Types of Information About Schools Attended 133
Table 42: Percentages of OSR Files Containing Different Types of Information About Progress in Secondary School 134
Table 43: Percentage of OSR Files Containing Different Types of Family Information as Inclusions 134
Table 44: Percentages of OSR Files Containing Types of Health Data 135
Table 45: Percentages of Files Containing Different Types of Guidance Notations 135
Table 46: Percentages of Referrals made to Different Types of People 136
Table 47: Relative Frequencies of Different Types of Assessments and Standardized Tests 136
Table 48: Percentages of All Files Containing Different Types of Assessment Report 137
Table 49: Percentages of Central Office Files Containing Various Types of Attendance/Social Work Information 137
Table 50: Percentages of Central Office Files Containing Various Types of Special Education Information 138
Table 51: Percentages of Central Office Files Containing Various Types of Psychological Information 138
Table 52: Percentages of Central Office Files Containing Various Types of Special Education Information 139
Table 53: Percentages of Central Office Files Containing Various Types of Psychological Information 139

SUMMARY OF RECOMMENDATIONS

I. INTRODUCTION

The changes instituted by the 1982 Act to Amend the Education Act, referred to here as "Bill 82," and the advancements in the information handling capabilities of the computer are two developments that should have a profound effect on the collection, retention, and use of student information. This report examines the implications of the enactment of special education legislation with reference to record-keeping for all students, rather than for just the "exceptional" pupil. In formulating its recommendations, the study recognizes that few school systems presently employ computers in information handling to any large degree. It is also recognized that to develop the records required to meet the future needs of schools and their students, a substantial period will be necessary for implementation, whether changes employ paper, microfilm, computer files, or a combination of these. This summary presents the recommendations deriving from the findings of the study, "The Ontario Student Record and the Record-Keeping Ramifications of Bill 82," together with proposed specific legislation and policy recommendations developed by the study team.

II. THE STUDENT INFORMATION SYSTEM (SIS) AND ITS NETWORK

Recommendation 1: that the Ministry of Education define a new integrated Student Information System (SIS) by consolidating existing and proposed legislation.

Recommendation 2: that the Ministry of Education provide guidelines for the implementation by school boards of all aspects of the redefined SIS.

Recommendation 3: that the Ministry of Education allocate resources for the implementation of the redefined SIS as a priority.

Recommendation 4: that the Ministry of Education define the network in Ontario within which the SIS will function.

Recommendation 5: that the Ministry of Education provide guidelines to school boards on the nature and use of the network.

Recommendation 6: that the Ministry of Education define the specific types of information about a student that shall or shall not be collected.

Recommendation 7: that the Ministry of Education provide detailed guidelines to school boards for the interpretation of these types of information.

III. THE PURPOSE OF THE RECORD

Recommendation 8: that the purpose of the student record and its management system be defined in the Act.

Recommendation 9: that the sole purpose of the student information system be defined as the improvement of the quality of the instruction of the pupil.

Recommendation 10: that student information failing to contribute to the improvement of instruction of the pupil be excluded and expunged from the record.

IV. DEFINITION OF THE SIS

A. Name and Scope

Recommendation 11: that the SIS be entitled "The Student Information System of the _____ Board of Education/Roman Catholic Separate School Board" (SIS).

Recommendation 12: that the SIS contain the following elements:

i. the office index card (OSOR)
ii. the OSR folder
iii. the OSR inclusions
iv. the school health card
v. the attendance file
vi. the documentation file
vii. professionals' notes

Recommendation 13: that the SIS be defined as incorporating all identifiable data and information relating directly to a student's instruction, collected and/or maintained by a school board or by a person acting for or in concert with a school or board.

Recommendation 14: that the SIS be regarded as a single student information management system encompassing all education-related student information within one control structure.

Recommendation 15: that all SIS information stored outside the OSR folder be listed in an index, the index to be stored in the documentation file and to record the date of inclusion and location of all such information.

Recommendation 16: that all considerations regarding pupil records and the SIS apply to all information regardless of the medium utilized for its collection, storage or dissemination.

B. The Attendance Record

Recommendation 17: that the attendance file be considered an element of the SIS and that the degree to which information in the SIS should be available to attendance counsellors be explicitly stated.

C. Professionals' Notes

Recommendation 18: that working notes, files, or records of professionals who are governed by mandate of legislation or by codes of ethics to protect confidentiality and privacy, which contain information that can be identified with a specific student, and which have bearing on or are used to determine the educational program of the student, be considered a discrete element within the SIS, and be for the sole use of the professional in consultations with the student/parent.

Recommendation 19: that professionals retaining notes as defined in Recommendation 18 be responsible for ensuring the high quality of information thus retained, for safeguarding the security of such information, and for determining whether information will be shared with the parent/student, within the framework of relevant legislation.

Recommendation 20: that personnel not governed by mandate of legislation or by codes of ethics to protect confidentiality and privacy be prohibited from retaining working notes, files, or records outside the OSR folder.

D. Access by Professionals

Recommendation 21: that professionals who are governed by mandate of legislation or by codes of ethics to protect confidentiality and privacy, and who are currently working directly with a pupil in compliance with the Act, may be accorded access to relevant pupil information in the SIS by the principal, following initial consent granted by the parent/pupil.

Recommendation 22: that personnel not governed by mandate of legislation or by codes of ethics to protect confidentiality and privacy be prohibited from having access to any pupil information in the SIS in the absence of the direct consent of the pupil/parent; access will be granted only after an affirmation or oath of secrecy has been taken and only under the direct supervision of the school principal, board senior official, or their designates.

E. Logs and Restriction

Recommendation 23: that the principal ensure that a log be maintained in each element of the SIS indicating what, when, and to whom school-based information has been released from the SIS to third parties.

Recommendation 24: that agendas for and minutes of administrative procedures required or permitted under the Act be maintained only on an individual basis and be retained only within the SIS.

F. Dating and Review

Recommendation 25: that all inclusions in the SIS be dated to ensure currency.

Recommendation 26: that systematic annual reviews of the contents of the SIS be conducted by or under the supervision of the principal, to remove outdated, inappropriate, irrelevant, or harmful data.

G. The Health Card

Recommendation 27: that a school health card be established by the principal, based on information obtained annually from the parent, and be included as an element of the SIS.

Recommendation 28: that the school health card contain only information sufficient to inform school personnel of any health condition which may require emergency attention, or place a pupil at risk in specific educational programs or activities, or significantly affect pupil instruction; it should include necessary first-aid procedures as well as the name of a physician to call in an emergency.

H. The Documentation File

Recommendation 29: that a documentation file be established as an element of the SIS and be kept separate from the OSR folder.

Recommendation 30: that the documentation file contain only those documents that have been completed primarily to meet legal and quasi-legal requirements and procedures, including but not limited to consents, child custody and child access provisions, suspension and expulsion orders and appeal determinations, court documents, early school leave determinations, and documents of identification, placement, review and appeal proceedings and decisions.

I. Location and Guidelines

Recommendation 31: that all elements of the SIS normally be retained in the school in which the pupil is placed or registered.

Recommendation 32: that a clear and precise set of guidelines be established to assist the principal in selecting categories of school-based information relevant to the pupil's education, required by legislation, or that are required to document decision-making or administrative procedures.

Recommendation 33: that pre-service and in-service professional training programs and materials be developed to foster an understanding of the issues and appropriate practices related to information management.

V. LEGAL-ETHICAL CONSIDERATION

A. Consent

Recommendation 34: that requirements for informed consent be made explicit, in the form of statutes, regulations, policy statements, and/or operating procedures.

Recommendation 35: that in order to ensure the validity of consent, subjects be fully informed of the implications of providing and withholding that consent, and be afforded the opportunity to discuss the consent request fully.

Recommendation 36: that consent to collect or disseminate data be provided by elected representatives when and only when data are of direct educational relevance and required for pupil instruction, and that direct consent be obtained prior to the collection or transmission of all other data.

Recommendation 37: that a consolidated list of information categories required by legislation and school board policy for the collection or transmission of information be constructed for the guidance of principals and for the information of students and parents.

B. Access

Recommendation 38: that student/parent access to the SIS be defined to include access to all elements of that system, with the sole exception of the strictly confidential working notes, files or records of a professional, which are not accessible to any other personnel in the educational system or outside it.

Recommendation 39: that where a student or parent requests a copy of SIS materials to which the student or parent has access, such a copy be provided and the "out of pocket" cost of duplicating such materials be borne by the student or parent.

Recommendation 40: that sole control of access and consent be granted to the parent while the pupil attends an elementary school, up to and including grade eight, within both public and separate school systems.

Recommendation 41: that shared control of access and consent between the parent and the pupil be granted from the time of the pupil's entry into a secondary school program, beginning at grade nine in both public and separate school systems, and until the pupil's attainment of eighteen years of age.

Recommendation 42: that sole control of access and consent be granted to the pupil upon the pupil's attainment of eighteen years of age, unless there is a reasonable cause for continued shared control while the pupil remains in school.

Recommendation 43: that where a parent is incapable of exercising control over access and consent, mechanisms be developed to ensure third-party advocacy for the child.

Recommendation 44: that the principal be able to authorize access to the school-based SIS by persons who stand in a reasonably demonstrated substitute-parent relationship to the pupil; access should be on the same basis as that granted to natural and adoptive parents.

Recommendation 45: that the principal be required to establish the identity of persons unknown to the school prior to granting them authorized access to the SIS.

Recommendation 46: that the principal refuse access to the SIS by a separated or divorced parent only upon provision to the principal of a duly constituted court order prohibiting such access, or as noted in Recommendation 47.

Recommendation 47: that where, in the considered judgment of the principal, access to the SIS by a separated or divorced parent will place the child or a third party in a situation of direct jeopardy, parental access to the student's record be refused; approval of the principal's written statement of the basis for such judgment must first be given by the appropriate supervisory officer; the reasons for refusing access and the time period to which the prohibition applies must be stated.

C. Security

Recommendation 48: that appropriate regulation, policy, and operating procedures be developed at provincial and board levels to ensure the security of electronically-stored data where existing legislation is silent or insufficiently protective of such security.

Recommendation 49: that procedures be instituted to ensure the destruction of redundant and purged materials under conditions that protect the security of data and information.

Recommendation 50: that each board appoint a supervisory officer to be responsible for the management of the SIS, including the preparation of policies and guidelines to assist principals and students/parents in issues related to record management.

Recommendation 51: that each school system employee, including support, clerical, and data-handling staff, who works with student data and information, explicitly affirm his or her intention to protect the security and integrity of such data and information.

Recommendation 52: that the principal's duties be amended to include the responsibility for the currency of school-based pupil data and their protection from damage, loss, unwarranted disclosure, and unauthorized use.

Recommendation 53: that professionals who maintain information in their notes, records, and files that can be identified with an individual student and that is kept separate from the OSR folder be responsible for the security and integrity of all such materials.

Recommendation 54: that implementation of the SIS index commence September 1, 1985, for all students entering a school system for the first time and be continued each year thereafter; this index should be maintained in the documentation file.

Recommendation 55: that each school board provide appropriate and sufficient services, equipment, facilities, and resources necessary to ensure the security and integrity of student records retained in or by the school and school system.

Recommendation 56: that province-wide funding formulae and mechanisms ensure the provision of financial support for student data management, thus enabling boards to construct and manage the SIS effectively.

D. Informing

Recommendation 57: that the legislative framework explicitly states that students and parents be provided with the opportunity to be fully informed of the existence, contents, and uses of the SIS and its management system.

Recommendation 58: that students and parents be provided with the opportunity to be fully informed of the procedures governing, and the officials responsible for, the management of the SIS.

Recommendation 59: that students and parents be provided with the opportunity to be fully informed of the rights and obligations of practitioners, parents, and students with respect to the SIS.

Recommendation 60: that students and parents be provided with the opportunity to be informed, as specified in Recommendations 57 to 59, upon the establishment of the pupil record, upon the transfer of a record into the school system, and at periodic and regular intervals thereafter.

Recommendation 61: that each communication used to inform students and parents about pupil records, rights, and obligations be complete, non-technical, easy to comprehend, and in a language accessible to the students and parents.

Recommendation 62: that guidelines for and prototypes and examples of appropriate communication informing mechanisms be developed and disseminated to boards for use as modifiable resource materials to inform students/parents of record-keeping policies, practices, and management.

VI. LEGISLATION, POLICY AND OPERATING PROCEDURES

A. Informational Attributes

Recommendation 63: that the Ministry of Education define in legislation the rights and obligations of students, parents, and personnel with respect to ensuring the completeness, accuracy, pertinence, and timeliness of student information.

Recommendation 64: that the Ministry of Education provide detailed guidelines for the interpretation and implementation of processes relevant to the attributes noted in Recommendation 63.

Recommendation 65: that school boards define in policy the rights and obligations of students, parents and personnel with respect to ensuring completeness, accuracy, pertinence and timeliness of student information.

Recommendation 66: that school boards establish operating procedures to ensure completeness, accuracy, pertinence, and timeliness of student information.

B. Systemic Functions

Recommendation 67: that the Ministry of Education define in legislation the rights and obligations of students, parents, and personnel with respect to the functions of collecting, storing, updating, retrieving, and transmitting student information.

Recommendation 68: that school boards define in policy the rights and obligations of students, parents, and personnel with respect to the functions of collecting, storing, updating, retrieving, and transmitting student information.

Recommendation 69: that school boards establish operation procedures to ensure the effective collection, storage, updating, retrieval and transmission of student data.

C. Legal-Ethical Considerations

Recommendation 70: that the Ministry of Education define in legislation the rights and responsibilities of students, parents, and personnel with respect to the legal-ethical considerations of consent, access, security, and being informed.

Recommendation 71: that the Ministry of Education provide detailed guidelines to the interpretation and implementation procedures with respect to the legal-ethical considerations of consent, access, security, and being informed.

Recommendation 72: that school boards define in policy the rights and obligations of students, parents and personnel related to consent, access, security, and being informed.

Recommendation 73: that school boards establish operating procedures to ensure that rights and obligations of consent, access, security, and being informed be honoured.

D. Training and Monitoring

Recommendation 74: that the Ministry of Education establish in-service training and workshops for senior board personnel and their delegates, to inform them of the principles, rationales, purpose, nature, constituent elements, and development of the revised Student Information System.

Recommendation 75: that the Ministry of Education undertake discussion with faculties of education with a view to the introduction of components dealing with the principles and practices of the revised Student Information System into the pre-service education of teachers.

Recommendation 76: that school boards establish in-service training and workshops for administrative and teaching staffs to inform them of the principles, rationales, purpose, nature, constituent elements, and development of the revised Student Information System.

Recommendation 77: that the Ministry of Education monitor the implementation of the revised Student Information System by its own officials and by school boards.

Recommendation 78: that school boards monitor all aspects of the implementation of the revised Student Information System by their own administrative and teaching staffs.

VII. MANAGEMENT AND CONTROL OF THE STUDENT INFORMATION SYSTEM

A. Provincial Legislation

Recommendation 79: that legislation be enacted to define the following:

1. **Definition and purpose of the SIS**
    - **the purpose of the Student Information System (SIS);**
    - **the primary uses of the SIS;**

- when an SIS shall be initiated for a student;
- the school system's SIS as the sole record of identified student data;
- personnel responsible for SIS management in the school board;
- personnel responsible for SIS management in the school;
- terms that are relevant to control of the SIS:
  - student or pupil;
  - parent;
  - guardian;
  - professional;
  - student information.

2. Consent
   - direct consent;
   - representational consent;
   - when direct consent is required;
   - who may give direct consent;
   - who may give representational consent;
   - when representational consent is permissible;
   - requirements for consent to conduct research based on student information;
   - requirements to provide data for ministry purposes;
   - requirements to provide data for board purposes;
   - requirements to provide data required for the fulfillment of the principal's duties;
   - requirements to provide data for the fulfillment of the duties of the attendance counsellor.

3. Access
   - access;
   - rights of student to access;
   - rights of parent to access;
   - persons who may grant access to a student's record;
   - right to copy data from the record;
   - right to interpretation of record entries;
   - rights of access of teachers and principal of the pupil;
   - rights of access of other teachers, supervisory officers, and professionals working with the pupil;
   - conditions for access to student data by any other person;
   - conditions for gaining access for the purpose of conducting research;
   - obligation of all persons with access to maintain secrecy;
   - protections for subjects against contents being used as evidence;
   - protections for donors from actions arising from record contents;
   - protections to prevent being required to give evidence about the record;
   - protections to prevent a record being admissible in a legal proceeding;
   - requirement to log entry by any non-school person gaining access to a file;
   - requirement to log non-school data dissemination from student record;
   - requirement to log, in the OSOR, record transfers to new schools.

4. Security
   - obligations of all board personnel to ensure the security of all student records.

5. Informing
   - obligation of the board to inform students/parents of the SIS, including:
     - purpose;

  - structure;
  - types of information retained in the elements of the SIS;
  - rights regarding access, consent, correction of errors, etc.

6. Accuracy
   - obligation of the board to ensure the accuracy of data in the SIS;
   - right of the parent/student to request the correction of inaccurate data;
   - right of parent/student to appeal a refusal to correct data in the SIS.

7. Completeness
   - obligation of a board to ensure the completeness of data in the SIS;
   - right of parent/student to request the addition of data to the SIS;
   - right of parent/student to appeal a refusal to add data to the SIS.

8. Pertinence
   - obligation of a board to ensure the pertinence of data in the SIS;
   - right of parent/student to request the removal of non-pertinent SIS data;
   - right of parent/student to appeal a refusal to remove non-pertinent data.

9. Timeliness
   - obligation of the board to ensure the timeliness data in the SIS;
   - right of parent/student to request the removal of out-of-date SIS data;
   - right of parent/student to appeal a refusal to remove out-of-date data.

B. Provincial Regulations

Recommendation 80: that regulations be produced which clarify the following:

1. Description of the SIS
   - information to be considered as student information in the SIS;
   - media which may be employed for the SIS;
   - an index to be kept in the SIS for locating student data retained outside the OSR Folder;
   - information that is required to be retained in the index;
   - the required location of the index;
   - obligation to initiate an SIS for a student upon first registration;
   - obligation to destroy all data not kept as defined in the regulations;
   - elements of the Student Information System (SIS);
     - OFFICE INDEX CARD (OSOR)
       - purpose
       - data required to be retained in file
       - data permitted to be retained in file
       - format of the record
       - medium for its retention
       - period of its retention
     - ONTARIO STUDENT RECORD FOLDER (OSR)
       - purpose
       - data required to be retained in file
       - data permitted to be retained in file
       - format of the record
       - medium for its retention
       - period of its retention
     - OSR INCLUSIONS
       - purpose
       - data required to be retained in file
       - format of the record

    - medium for its retention
    - period of its retention
  - HEALTH CARD
    - purpose
    - data required to be retained in file
    - format of the record
    - medium for its retention
    - period of its retention
  - ATTENDANCE FILE
    - purpose
    - data required to be retained in file
    - format of the record
    - medium for its retention
    - period of its retention
  - DOCUMENTATION FILE
    - purpose
    - data required to be retained in file
    - format of the record
    - medium for its retention
    - period of its retention
  - PROFESSIONALS' NOTES
    - purpose
    - characteristics of data considered to be student data in the SIS
    - data which may be retained in a file
    - format of the record
    - medium for its retention
    - period of its retention.

2. Consent
   - conditions necessary for a valid direct consent;
   - conditions necessary for a valid representational consent:
     - by the legislature;
     - by the school board.

3. Access
   - conditions that apply to obtaining a copy of data in the SIS;
   - conditions that govern access to the SIS by students/parents;
   - conditions under which the record may be transferred to a new school:
     - under the jurisdiction of the same school board;
     - under the jurisdiction of another school board in Ontario;
     - under the jurisdiction of a school board outside Ontario;
     - which is a private school inspected by the Ontario Ministry of Education;
     - which is an uninspected private school;
   - information to be recorded in the OSOR on transfer of a record;
   - obligation of the board to ensure that staff maintain SIS secrecy;
   - requirement to maintain a log of the dissemination of data from the SIS.

4. Security
   - obligation of the board to ensure secure locations for all records;
   - obligation of the board to ensure secure equipment for all record files;
   - obligation of the board to ensure computer security procedures and codes for all data.

5. Informing
   - obligation of the board to inform students/parents of SIS procedures;
   - obligation of the board to inform students/parents of the index.

6. Accuracy
    - obligation of the board to institute verification procedures for the SIS.

7. Completeness
    - obligation of the board to ensure that all data categories required by legislation or regulations be included in the SIS.

8. Pertinence
    - obligation of the board to periodically review the pertinence of SIS data.

9. Timeliness
    - requirement to date all data in the SIS;
    - requirement to conduct periodic reviews of all data in the SIS.

C. School Board Policies

Recommendation 81: that policies be enacted by school boards concerning the following:

1. Description of the SIS.
    - the purpose of the Student Information System (SIS);
    - the elements of the SIS:
        - OFFICE INDEX CARD (OSOR)
            - purpose
            - characteristics
            - storage location
        - ONTARIO STUDENT RECORD FOLDER (OSR)
            - purpose
            - characteristics
            - storage location
        - OSR INCLUSIONS
            - purpose
            - characteristics
            - storage location
        - HEALTH CARD
            - purpose
            - characteristics
            - storage location
        - ATTENDANCE FILE
            - purpose
            - characteristics
            - storage location
        - DOCUMENTATION FILE
            - purpose
            - characteristics
            - storage location
        - PROFESSIONALS' NOTES
            - purpose
            - characteristics
            - storage location;
    - appointment of a supervisory officer to be responsible for the administration of the board SIS;
    - recognition of the principal as the official responsible for the SIS in the school;
    - data that are required by the board to be kept in or excluded from the SIS;
    - the standardized forms to be employed in collecting student data;

- the transition points at which standard data are to be collected.

2. Consent
    - requirement to obtain consents prior to collection of student data;
    - the form in which a consent should be obtained;
    - information that shall be given prior to obtaining a consent.

3. Access
    - the process to be used in requesting access to SIS data for research;
    - the officer to whom proposals for research should be addressed;
    - approvals and consents required to employ student data in research;
    - persons who have a right to access to the data retained in the SIS;
    - the official to whom a person must apply to request access to the SIS;
    - obligation of officials to identify persons who request access to the SIS;
    - requirement for a log of access to SIS data by non-school persons;
    - conditions that govern access to SIS data by non-school persons;
    - right of the parent/student to obtain a copy of data in the SIS;
    - conditions that apply to costs of copying data in the SIS;
    - obligation of official to transfer records as required by regulations.

4. Security
    - obligation of the principal to ensure security of records in the school;
    - requirement that the principal obtain an oath of secrecy from school staff working with the SIS;
    - requirement that the supervisory officer responsible for the SIS obtain an oath of secrecy from central board office staff working with the SIS;
    - appropriate locations for data files that are elements of the SIS;
    - appropriate methods for destroying data that are removed from the SIS.

5. Informing
    - means used by schools to inform parents/students of the purpose, contents, and processes of the SIS;
    - specific procedures for informing parents/students regarding the SIS:
        - annual information session at registration;
        - notification printed on all achievement forms or report cards;
        - information session prior to consent request;
        - information session prior to hearing in an IPRC;
    - data that are required to be retained on all students;
    - obligation of the principal to inform parents/students of the SIS;
    - periods when the principal should attempt to inform parents/students;
    - obligation of the principal to advise of the right and process of appeal.

6. Accuracy
    - obligation of the principal to ensure the accuracy of data in the SIS;
    - processes for requesting correction or removal of inaccurate data.

7. Completeness
    - obligation of the principal to ensure the completeness of data in the SIS;
    - right of parent/student to request the addition of data to the SIS.

8. Pertinence
    - obligation of the principal to ensure the pertinence of data in the SIS;
    - right of parent/student to request the removal of non-pertinent data from the SIS.

9. Timeliness

- obligation of the principal to ensure the timeliness of data in the SIS;
- requirement to date information added to the SIS;
- right of parent/student to request the removal of out-of-date data from the SIS.

D. School Board Operating Procedures

Recommendation 82: that operating procedures be developed by school boards concerning the following:

1. Description of the SIS
    - elements in the SIS;
        - OFFICE INDEX CARD (OSOR)
            - format of the card with a list of the data required to be retained
            - medium for its retention
            - location in the school
            - security provisions
            - disposition on student's withdrawal or graduation
        - ONTARIO STUDENT RECORD FOLDER (OSR)
            - format of the record folder with data required to be provided
            - medium for its retention:
                - while pupil is in school
                - after pupil withdraws or graduates
            - location of folder in the school while pupil is enrolled
            - required security provisions
            - disposition of folder when pupil withdraws or graduates
            - period of folder retention beyond withdrawal or graduation
        - OSR INCLUSIONS
            - data required to be retained in folder
            - data that may (and may not) be kept in the folder
            - periodic procedures for examining and purging
            - requirement to date all data placed in the folder
            - procedures to save legally or historically significant documents
            - period of data retention after the pupil withdraws or graduates
            - disposition of the data after they are removed from the folder
        - HEALTH CARD
            - data required to be retained in the file
            - method of flagging significant health problems relevant to educational provision on the OSOR
            - procedures for collecting the data
            - format of the card
            - location in the school
            - period of its retention
            - disposition of the card upon the pupil retiring or graduating
        - ATTENDANCE FILE
            - data required to be retained in file
            - format of the record
            - location of:
                - the register
                - the attendance counsellor's file
            - medium for its retention
            - period of its retention
        - DOCUMENTATION FILE
            - documents that are appropriate for retention in the file
            - procedure for purging important historical or legal data from the OSR
            - format of the record

    - medium for its retention
    - location of the file
    - period of its retention
  - PROFESSIONALS' NOTES
    - characteristics of data considered to be student data in the SIS
    - data which may be retained in the notes
    - security required for data held in professionals' files
    - location of the notes
    - medium of retention of the notes
    - period of retention of the notes
    - definition of a professional within the context of the school board jurisdiction
- the official in the school to whom all inquiries should be made;
- the official in the central board office to whom inquiries should be made;
- standard forms with which to collect data in the school;
- specific times at which schools are required to collect standard data;
- the specific data required to be collected and updated;
- data that the Ministry of Education requires be retained;
- data that the school board requires be retained.

2. Consent
   - standard forms on which to record the consent of parent/student;
   - procedures for gaining approval for research to be conducted with student data;
   - categories of consent appropriate for the use of student data in research.

3. Access
   - information required by the principal in request for access to the SIS;
   - procedures principals use to identify parents who ask for access to the SIS;
   - procedures to use when request for data is received by telephone;
   - procedures principals use to record refusal of access to the SIS;
   - procedures principals use when a consent to gain access is presented;
   - information to be recorded in the access log;
   - where the access log is to be kept;
   - procedure used on receiving request to transfer records to new school;
   - transfer procedure used when reports of individual assessments are included in the SIS;
   - transfer procedure used when reports from non-school board agency are included;
   - disposition of records held in school one year and then three years after pupil retires;
   - disposition of transfer requests received after records sent to central board office.

4. Security
   - procedures for destroying data and documents removed from the SIS;
   - necessary security arrangements for records retained in the schools;
   - necessary security arrangements for records retained in the central board office;
   - necessary security arrangements for records retained in the central board office computer;
   - necessary security arrangements to prevent abuse of access through school terminals.

5. Informing

- specific times and modes by which parents are to be informed of the SIS;
- types of information on the SIS that are to be provided to parents/students;
- types of information on the SIS that are to be provided to teachers.

6. Accuracy
   - procedures to be employed to ensure the accuracy of data entering the SIS;
   - feedback processes to correct data already in the SIS;
   - procedures for dealing with a request to remove data from the SIS;
   - procedures for the refusal of a request to remove data.

7. Completeness
   - procedures for review to ensure the completeness of data in the SIS;
   - procedures for requesting the supplementation of data in the SIS;
   - procedures for the refusal to add data to the SIS.

8. Pertinence
   - procedures for review to ensure the pertinence of data in the SIS;
   - procedures for the purging of non-pertinent data from the SIS;
   - procedures for dealing with a request to remove non-pertinent data from the SIS;
   - procedures for the refusal of a request to remove data from the SIS.

9. Timeliness
   - procedures for updating to ensure the timeliness of data in the SIS;
   - procedures for the removal of out-of-date data from the SIS;
   - procedures for dealing with a request to update or remove data from the SIS;
   - procedures for the refusal of a request to update or remove data from the SIS.

CHAPTER ONE:
INTRODUCTION

I. STUDENT INFORMATION IN ONTARIO

The Ontario Student Record (OSR) was developed in the early 1950s to meet an obvious need for more effective record-keeping practices in Ontario's schools. By 1959, the OSR's effectiveness had led to its almost universal voluntary adoption across the province. Subsequent evaluations and revisions, and concomitant legislative and regulatory statements in association with the Education Act of Ontario, have kept the OSR a model of progressive student data management policy in Canada.

Major revisions, both to the format and legislation governing the OSR, were initiated in the early 1970s. Significantly restricting access to the record and modifying its use and maintenance, these changes recognized the issues of privacy and confidentiality to a much greater degree than had previous legislation. In addition, the revised record, now open to parents and students, was oriented to include the positive attainments of the student. Legislation guaranteed access to the record by students, parents, teachers, principals, and supervisory officers, but prohibited access and use by others without the explicit written permission of the parent and/or student. An assessment of the effectiveness of the implementation of these changes--carried out between 1974 and 1976--was reported in Humphreys and Elwood (1976). While the major objectives of the 1973 revisions were found to have been realized, further alterations were suggested and subsequently implemented. The 1973 series of revisions and the subsequent alterations enhanced the exemplary status of the OSR in legislative and administrative practice relating to student information in Canada.

II. ORIGINS OF THIS STUDY

Amendments to the Education Act in 1980, commonly referred to as "Bill 82," created the need for a major re-examination of the management of student information in general and the OSR in particular. "Bill 82" mandated a number of processes which require collecting and maintenance of substantial amounts of student information, including documentation of certain decision-making processes. The amendments called for: (i) "early and ongoing identification of the learning abilities and needs of pupils," (ii) "the provision of appropriate special education programs and special education services" based upon the results of "continuous assessment and evaluation," and (iii) the institution of processes for decision-making which provided for appeals and which were in keeping with legislated rules for hearings. A thorough examination of all aspects of the OSR was required to ascertain whether it could accommodate the information needs implied by "Bill 82" within a framework consistent with past OSR practice. This study was commission to ascertain whether the OSR, as presently conceived, could adequately meet all the demands of the 1980 legislation. Essentially, the study focussed on the need to align student data management in Ontario with the requirements of "Bill 82."

The need for information has developed at a rapid pace as a result of new legislation, and the ability to manage this information through the use of computers has become affordable and more efficient. Private industry and government have long been aware of the potential power of the computer as a management tool, but its high cost delayed the introduction of computer technology into the management of educational decision-making. Recent cost reductions have, however, motivated school and school board administrators to look at the applications of computer technology to student information.

In December 1981, the Ontario Ministry of Education contracted with the authors to conduct a study to determine how well the OSR had met the challenges presented by "Bill 82." The study was to investigate the nature and the adequacy of the OSR and related record-keeping practices in a cross-section of Ontario school systems. The study was also to analyse relevant ministry documents and provide a critique of all the relevant policy and procedure manuals of each board surveyed. Furthermore, the study team was to construct a model or models which would illustrate the attributes required for adequate data management procedures. These models were to be based on an intensive examination of a small group of school systems with special education programs already in place prior to the passage of "Bill 82." The investigation, in progress since February 1982, has generated a series of reports and papers relevant to student information management in schools and school systems. This is the final report of the study.

III. ASSUMPTIONS

After initial consideration of the proposed study, a number of assumptions were developed that guided the thinking of the study team. These should be explicitly stated. It is assumed:

1. that all information about students be intended to improve the quality of their education;

2. that any student information system accommodate the full range of students and their exceptionalities;

3. that the management system of student information be functional for all students and have sufficient sub-system components to ensure that exceptional students' information be accommodated;

4. that any student information system be designed to ensure that it can be managed easily by classroom teachers, the primary decision-makers where students' programs are concerned;

5. that any student information system designed to enhance the education of the student take into account the information needs of a variety of people both actually and potentially involved with the child's education, while maintaining the integrity and security of the information; and
6. that a student information system and its concomitant management system be considered as two sub-systems within the student information metasystem in the same way that students, classroom teachers, schools, and school boards are sub-systems within the Ontario school system.

IV. STUDY FRAMEWORK AND TASKS

The research team conducted eight interrelated inquiries during 1982, in order to provide a report on the current status of student information and to formulate criteria for guiding future education practices in the management of student data. In order to consider as many perspectives as possible, the authors adopted a consultative approach, seeking out the views of a large number of individuals and representatives of organizations from the education, health, social services and consumer sectors. The study team also conducted interviews with personnel in a total of eighteen school systems across Ontario, collecting data from students, parents, teachers, and administrators. In addition, an extensive examination of the published literature on information systems, student information, privacy, and computer technology in the management of school systems was conducted and provided a base from which to work. The study also undertook an in-depth examination of the legal implications of "Bill 82," and an intensive analysis of present practice in schools and school boards.

Each of these tasks, a sizable study in its own right, has been summarized in an interim report. Each task is described briefly below with short notes on the ways in which the major findings of the interim reports have been incorporated into this final publication.

Task 1: An analysis of the literature in the areas of information systems and management, educational theory and administration, and special education policy and practice was conducted in order to develop a conceptual framework leading to the establishment of criteria by which the effectiveness of a student data management system might be judged.

Task 1 has been published in Report No. 1, Criteria of Effectiveness of a Student Information Management System (Feeney, Humphreys & Davidson, 1982). Parts of Report No. 1 have been incorporated into chapter 2 of this report, and the criteria developed in Task 1 have been directly employed in the consideration of many of the issues discussed in the study as a whole.

Task 2: An analysis and critique of legislation, regulations, memoranda and interpretations relating to the OSR and the issues of early identification, mandatory special education, and information management was undertaken, in order to ascertain the strengths and weaknesses of present policy and legislation, and to suggest modifications where such might be required.

Task 2 has been published in Report No. 2, Legal Aspects of Student Information in Ontario (Humphreys & Weintraub, 1983). Aspects of Report No. 2 have here been incorporated into chapter 4, where they bear on the statement of the purpose of student information systems, and in chapter 5, where they relate to the management processes employed for student data.

Task 3: An intensive field study of student record systems and practices was conducted in nine Ontario school boards, selected on the basis of their willingness to participate and their extensive involvement in the development of special education programs. Sample selection recognized diversity in geographical location, language, and size of board, and included both separate and public educational systems. Instrumentation and methodology were tested in a pilot study in one board of education.

The methodology of the study consisted of four basic components: (i) the collection and analysis of relevant policy and guideline documents from central board and school offices; (ii) intensive interviews with each board's senior administrative and consultative personnel involved in data management, guidance, attendance, social work, early identification, educational and psychological assessment, placement, special education, program design, development, and staffing; (iii) intensive interviews at elementary, junior, and senior secondary schools with principals, vice-principals, classroom and resource teachers, guidance counsellors, parents, and senior students; and (iv) a survey of central, area, and school records to ascertain categories of information stored and record-keeping practices. This field research developed our understanding of the methods, rationales, and purposes of the flow of information for both the "regular" and the "exceptional" student. In addition, the research led to the identification of the dilemmas most likely to be encountered by boards of education.

Task 4: An extensive field study of student record systems and practices was conducted in twelve Ontario school boards, to ensure a broader and more diverse representation across the province. Five of these boards, designated as "Task 3/4 overlap boards," through in-depth interviews, as part of Task 3, while seven participated in questionnaire-based research at central and school levels. Document collection supplemented the field research in each board. Sample selection depended upon willingness to participate, diversity in geographical location, language, and size of board; both separate and public education systems were included. Instruments and methodology were tested at the board in which Task 3 was piloted.

The collection of Task 4 field data enabled a more extensive compilation and analysis of Ontario record-keeping practices. and widened the research perspective to permit a more accurate analysis of the current state of affairs, particularly in conjunction with the Task 3 intensive study. Due to the complex interrelation of the Task 3, Task 4 and combined Task 3/4 data, these tasks have been discussed together in Report No. 3-4, Student Records in Ontario's Schools: A Description and Analysis of Use (Humphreys, Feeney, Davidson & Weintraub, 1983).

5. that any student information system designed to enhance the education of the student take into account the information needs of a variety of people both actually and potentially involved with the child's education, while maintaining the integrity and security of the information; and

6. that a student information system and its concomitant management system be considered as two sub-systems within the student information metasystem in the same way that students, classroom teachers, schools, and school boards are sub-systems within the Ontario school system.

IV. STUDY FRAMEWORK AND TASKS

The research team conducted eight interrelated inquiries during 1982, in order to provide a report on the current status of student information and to formulate criteria for guiding future education practices in the management of student data. In order to consider as many perspectives as possible, the authors adopted a consultative approach, seeking out the views of a large number of individuals and representatives of organizations from the education, health, social services and consumer sectors. The study team also conducted interviews with personnel in a total of eighteen school systems across Ontario, collecting data from students, parents, teachers, and administrators. In addition, an extensive examination of the published literature on information systems, student information, privacy, and computer technology in the management of school systems was conducted and provided a base from which to work. The study also undertook an in-depth examination of the legal implications of "Bill 82," and an intensive analysis of present practice in schools and school boards.

Each of these tasks, a sizable study in its own right, has been summarized in an interim report. Each task is described briefly below with short notes on the ways in which the major findings of the interim reports have been incorporated into this final publication.

Task 1: An analysis of the literature in the areas of information systems and management, educational theory and administration, and special education policy and practice was conducted in order to develop a conceptual framework leading to the establishment of criteria by which the effectiveness of a student data management system might be judged.

Task 1 has been published in Report No. 1, Criteria of Effectiveness of a Student Information Management System (Feeney, Humphreys & Davidson, 1982). Parts of Report No. 1 have been incorporated into chapter 2 of this report, and the criteria developed in Task 1 have been directly employed in the consideration of many of the issues discussed in the study as a whole.

Task 2: An analysis and critique of legislation, regulations, memoranda and interpretations relating to the OSR and the issues of early identification, mandatory special education, and information management was undertaken, in order to ascertain the strengths and weaknesses of present policy and legislation, and to suggest modifications where such might be required.

Task 2 has been published in Report No. 2, Legal Aspects of Student Information in Ontario (Humphreys & Weintraub, 1983). Aspects of Report No. 2 have here been incorporated into chapter 4, where they bear on the statement of the purpose of student information systems, and in chapter 5, where they relate to the management processes employed for student data.

Task 3: An intensive field study of student record systems and practices was conducted in nine Ontario school boards, selected on the basis of their willingness to participate and their extensive involvement in the development of special education programs. Sample selection recognized diversity in geographical location, language, and size of board, and included both separate and public educational systems. Instrumentation and methodology were tested in a pilot study in one board of education.

The methodology of the study consisted of four basic components: (i) the collection and analysis of relevant policy and guideline documents from central board and school offices; (ii) intensive interviews with each board's senior administrative and consultative personnel involved in data management, guidance, attendance, social work, early identification, educational and psychological assessment, placement, special education, program design, development, and staffing; (iii) intensive interviews at elementary, junior, and senior secondary schools with principals, vice-principals, classroom and resource teachers, guidance counsellors, parents, and senior students; and (iv) a survey of central, area, and school records to ascertain categories of information stored and record-keeping practices. This field research developed our understanding of the methods, rationales, and purposes of the flow of information for both the "regular" and the "exceptional" student. In addition, the research led to the identification of the dilemmas most likely to be encountered by boards of education.

Task 4: An extensive field study of student record systems and practices was conducted in twelve Ontario school boards, to ensure a broader and more diverse representation across the province. Five of these boards, designated as "Task 3/4 overlap boards," through in-depth interviews, as part of Task 3, while seven participated in questionnaire-based research at central and school levels. Document collection supplemented the field research in each board. Sample selection depended upon willingness to participate, diversity in geographical location, language, and size of board; both separate and public education systems were included. Instruments and methodology were tested at the board in which Task 3 was piloted.

The collection of Task 4 field data enabled a more extensive compilation and analysis of Ontario record-keeping practices. and widened the research perspective to permit a more accurate analysis of the current state of affairs, particularly in conjunction with the Task 3 intensive study. Due to the complex interrelation of the Task 3, Task 4 and combined Task 3/4 data, these tasks have been discussed together in Report No. 3-4, Student Records in Ontario's Schools: A Description and Analysis of Use (Humphreys, Feeney, Davidson & Weintraub, 1983).

Task 5: In Task 5, a model was developed for the design, use, and evaluation of education data management systems. The model was based upon a synthesis of the conceptual and theoretical considerations developed in Tasks 1 and 2. It incorporated a selection of the major components and factors, relevant to information management in present practices in Ontario school boards and schools, as derived from the analysis of Tasks 3 and 4.

In Task 5, models of the decision-making process were made to determine the types of data required to make student-related decisions, and the most appropriate location for such data. These models of decision-making, refined from Report No. 5, The Student Information System: A Model (Humphreys, Feeney & Davidson, 1983), are presented in chapter 3 of this report. A three-part model of a student information system (SIS) applicable to Ontario schools and school boards was also constructed. This model SIS, modified by further examination of the Task 3 and 4 findings and of Task 6's analysis, is presented in chapter 7 of this report.

Task 6: A comparative analysis was undertaken to determine the current needs for education information systems in Ontario. The analysis contrasted the criterion-based models developed in Task 5 with current practices in boards of education across the province. Recommendations for data management needs and practices were then developed, applicable both for the present and for the future when the provisions of "Bill 82" are fully implemented. The results of this analysis, synthesized in chapter 7 below, were published in Report No. 6, Current Needs of Student Information Systems in Ontario (Davidson, Manuel, & Humphreys, 1984).

Task 7: The preparation of a formal report on the research project was undertaken to provide information and analysis to the Ontario Ministry of Education and other decision-makers and research personnel in the education system. The final report was intended to provide an overview and synthesis of the critical theories, principles, practices, and guidelines presented in the research, and to incorporate the perspectives derived from interviews with over fifty Ontario groups and individuals whose endeavours are related to the education system. This report, No. 7, acts as the formal and final report of the study. All previous reports generated by the research project are listed in the reference section below.

Task 8: The development of additional documents, informal reports and other materials was undertaken and the results are available to teachers, parents, academics, assessment professionals, information managers, and the general public. These reports and articles will continue to be made available as they are produced.

V. ORGANIZATION OF THE FINAL REPORT

The final report of this project attempts to summarize the contents and conclusions of the six research tasks already published in Reports No. 1 to 6. Furthermore, this final report provides a synthesis of the earlier studies, which by their nature and timing had to be carried out, to some degree, in isolation from one another. Finally, this report provides a set of recommendations on student information policy and practice. While the authors recognize the difficulty of making definitive recommendations on all aspects of student information, for all children, at all levels of the Ontario school community, we have nevertheless attempted to do so. We trust that, although they may not agree with every recommendation, readers will recognize the complexity involved in our attempts to take account of a variety of interests, often conflicting.

To give the reader a convenient overview, our recommendations have been presented with little elaboration in a summary at the beginning of the report. Each recommendation is supported at greater length in the subsequent chapters.

Chapter 1 presents an historical review of the Ontario Student Record, followed by a statement of the assumptions underlying our study and the basic elements of its procedure. This will provide the reader with a context for assessing the methodology and results of the study.

Chapter 2 provides a conceptual framework for the study, based upon an analysis of the literature on student records, information systems, information management, and educational theory, policy and practice. A three-dimensional model depicts the generic characteristics of an information system appropriate for the management of student information. Criteria of effectiveness derived from the model are also discussed.

Chapter 3 focuses on the information needs of personnel. Models of decision-making in the classroom, school, and central board office depict the decisions made about a student and outline the information needs these decisions require, along with the information needs of the metasystems of each level. The chapter concludes with an illustration of the ways in which information is stored, retrieved, and moved within a network of elements at various recursive levels of the school system.

Chapter 4 discusses the present legal basis of the student information system and how that will be affected by recent amendments to the Act and by other legal considerations. A number of questions are posed about existing OSR legislation, along with proposals on the improvement of the present system.

Chapter 5 discusses existing legislative provisions for each of the legal-ethical considerations of consent, access, security and communication. It then considers the implications that "Bill 82" and other legislative enactments have for student information and proposes mechanisms to protect these data.

Chapter 6 details the methodology of the study, along with statistical data arrived at through the use of structured interviews, questionnaires, and the analysis of records. These data are presented in a series of tables, and the implications of some of the findings are discussed.

The current needs of student information are presented in summary form in Chapter 7. This chapter attempts to integrate major themes and concepts from earlier chapters by presenting a general discussion of the needs discovered through: (i) the examination of existing legislation; (ii) interviews with a wide spectrum of educational and social service specialists; (iii) interviews at various levels of the school system and with parents and students; (iv) surveys through questionnaires answered by school and system personnel; (v) examination of the contents of actual records; and (vi) comparison of findings with models of the student information system (SIS) and related networks.

Chapter 8 concludes with a detailed presentation of a model student information system.

CHAPTER TWO: CRITERIA FOR EFFECTIVE INFORMATION SYSTEM MANAGEMENT

I. INTRODUCTION

The recent amendments to the Education Act, 1974, have focused attention upon the need for an evaluation of the Ontario Student Record (OSR) system, based on the new information needs generated as a result of that legislation, as well as on the developments in technology that permit more effective information handling in school systems. While present student data management may have served the schools adequately during a period of low information use, conditions have radically altered. As has been noted in chapter 1, "Bill 82" introduced substantial new demands which raised questions addressed in earlier research dealing with the interface between human needs and technological developments. This chapter will address several generic issues and will present a model which integrates informational, systemic and legal-ethical perspectives. The literature on these subjects will also be reviewed briefly.

It should be noted that Report No. 1 included an extensive review of the literature on student records, information systems, information management, educational theory and administration, and special education policy and practice, with the aim of formulating a conceptual framework that would permit the establishment of criteria by which the effectiveness of a student data management system might be judged. Essential elements of that review, based on consideration of general information system theory, as opposed to specifically education theory, are provided below.

II. LITERATURE REVIEW

The development of an effective information management system requires an understanding of the progress that has been made in past research. This review will begin with writings on the 1960s, as these are the most relevant to our particular problems.

A. Student Information

The literature on student records deals with a variety of issues including: privacy and confidentiality (Bevan & Caruso, 1970; Cornell, Baudot, Kirsh & Williams, 1972; Humphreys, 1980; Murray, 1972); security of records especially when computerized (Ball, 1977; Hoffman, 1973; and many others); right of access to student records (Brannon, 1974; Humphreys & Elwood, 1974); type of information to be disclosed or disseminated (Nolte, 1977; Walden, 1974); legal constraints on professional behaviour imposed by legislation concerning student records (Getson, & Schweid, 1976; Huff, 1975; Kavine, 1973); problems, influences, and use of computerized student records (Dial & Goldberg, 1975; Hussain, 1973; Niblett, 1971); technical aspects of record definition and design (Humphreys, 1980; Putnam, 1974; Wilson & Olds, 1975); and effects of legislative changes upon researchers and others in the school system (Humphreys, 1977; Minnesota State Department of Education, 1974).

While the vast majority of the current literature emanates from the United States, Canadian studies on privacy and confidentiality have been produced by the Russell Sage Foundation in conjunction with the University of Toronto Guidance Centre (1972), by Humphreys and Elwood (1974, 1975, 1976), and by Humphreys (1980). Humphreys (1980) provides a comprehensive review of the literature on the ethical issues surrounding student records.

The last two works illustrate that in Ontario and throughout Canada, the student record is not viewed as an integral part of the teaching-learning process affecting the student, the school, or the school system: nor was it designed to be so. It has functioned largely as an historical record and a repository of the documents related to the student's history. "Bill 82," however, draws attention to the critical need to change that function. An Ontario board's obligation to provide early and continuing identification of learning abilities and needs, appropriate educational programs and services for children with identified exceptionalities, and identification, placement, and appeal procedures, all increase the need for an active student information system. "Bill 82's" amendments alter the role of the student record from a relatively unimportant repository of historical records to a dynamic information device integral to the mainstream of educational decision-making. Thus, the educator's, administrator's, and consumer's perception of the student record will need to change: the OSR must no longer be seen as the repository of innocuous information, irrelevant to educational decision-making (Humphreys, 1980, p. 121), but rather as a record providing information directly relevant to that decision-making. The development of such a system must be based upon sound theories of information management, applicable in practical terms to all the functions performed by one board.

B. Management and Information Systems

While early writers in management studies acknowledged the need for information, their research tended to minimize its importance. Anthony (1965) conceived of an organization as requiring a three-level control structure embodying strategic planning, management control, and operational control. Feeding into all three of these (and into the accounting process as well) was a function called "information-handling" (Anthony, 1965, p. 221). However, Anthony failed to deal adequately with this process in his text and only indicated it was necessary to the three-level management process. Such minimal treatment is inadequate when information processes play a central role in the provision of services, as, for example, those dictated by "Bill 82."

Hussain (1973, ch. 6) presented a refined version of Anthony's conceptual framework of management in the form of a three-tiered triangle with strategic planning at the apex and operational control on the wide base. Padro (1977) utilized this same triangular representation to depict the organizational levels of education and the information flow within them. Abstraction and/or summarization of information occurs as operational control level information ascends to the strategic planning level. Information generated at the strategic planning level broadens in implication and becomes more descriptive, detailed, and functional as it descends to the level of operational control.

Mintzberg (1978, ch. 2) differentiated two more structures within the organization (although they are not part of the operating core), the technostructure and the support staff. The technostructure provides analysis and specifications of the functions of the operating core, and encompasses reporting systems that provide information required for control. The support staff provide groups of internal services (from accounting to cafeteria functions) which maintain the overall operation of the organization, thus enabling it to fulfil its purpose.

Beer (1979, 1981) presented a "cybernetic" view of organizations. He sees the organization as consisting of five processes (not structures) which he calls Systems I to V. System I is the basic or operational unit of the organization. The other four systems are planning and managing (control) systems to maintain the viability of the system as a whole. In a manufacturing organization, for example, each plant or product line could be described as System I; in education, each student, classroom, or school, depending upon the purpose of the mapping of the organizational entity, might be defined as the operational unit (i.e., System I). The various systems and their environments are interrelated by means of regulated information feedback loops which link the elements of the organization, acting as the "glue," and thereby maintaining the system's viability (Beer, 1979, ch. 4). Beer uses the concept of "recursion" to illuminate the functioning of viable sub-systems within an organization or system (Beer, 1981, ch. 8). Levels of recursion are akin to Chinese boxes or the recurring images produced when two mirrors face one another.

By introducing regulated information feedback loops together with the notion of viability, Beer has altered the prevailing static, essentially structured, view of management and organization in favour of a dynamic and systemic view of organization. By adding the concept of levels of recursion to that of organizational purpose the dynamic organization can be seen in three-dimensional cybernetic terms.

In the cybernetic notion of management and organization, every functioning system must have a concomitant information system. Langefors (1973, p. 199) refers to the functioning system as the object system. Such an object system, for instance a manufacturing process or an educational system, is teleological, and must have some means of informing itself of its approach to its goal or purpose. The object system may either be directed or supported by its information system. In the former case, the object system cannot function without its information system. A railroad system, for example, with the set of light signals as its information system, would be a directive information system. In the case of the supportive system, the functioning of the object system is not directed by the information system but is enhanced by its operations; thus rail transit (an object system) is made more efficient by the process of cost-accounting (a supportive system), but trains can run without it.

In Beer's model, the change from a directive to a supportive information system can result from a change in the level of recursion. For example, test results from a computerized remedial mathematics program generally serve as directive information to divide the program into sub-routines which concentrate on those skills in which the student has not met minimum standards. However, when viewed by a classroom teacher (i.e., the object system), the results of the test can be supportive rather than directive, by providing diagnostic information for remediation.

Martin (1976, pp. 67-68) classifies information systems into four categories between the extremes of operational systems and information systems. The differentiation varies according to prior definitions of user requests. If, in the design of the information system, user requests have been known, pre-defined, and programmed, the system is called an operational data system. On the other hand, if user requests are unknown, ill-defined, and unprogrammed, the system is called an information system. In an information system the user must gain output through searches of data bases.

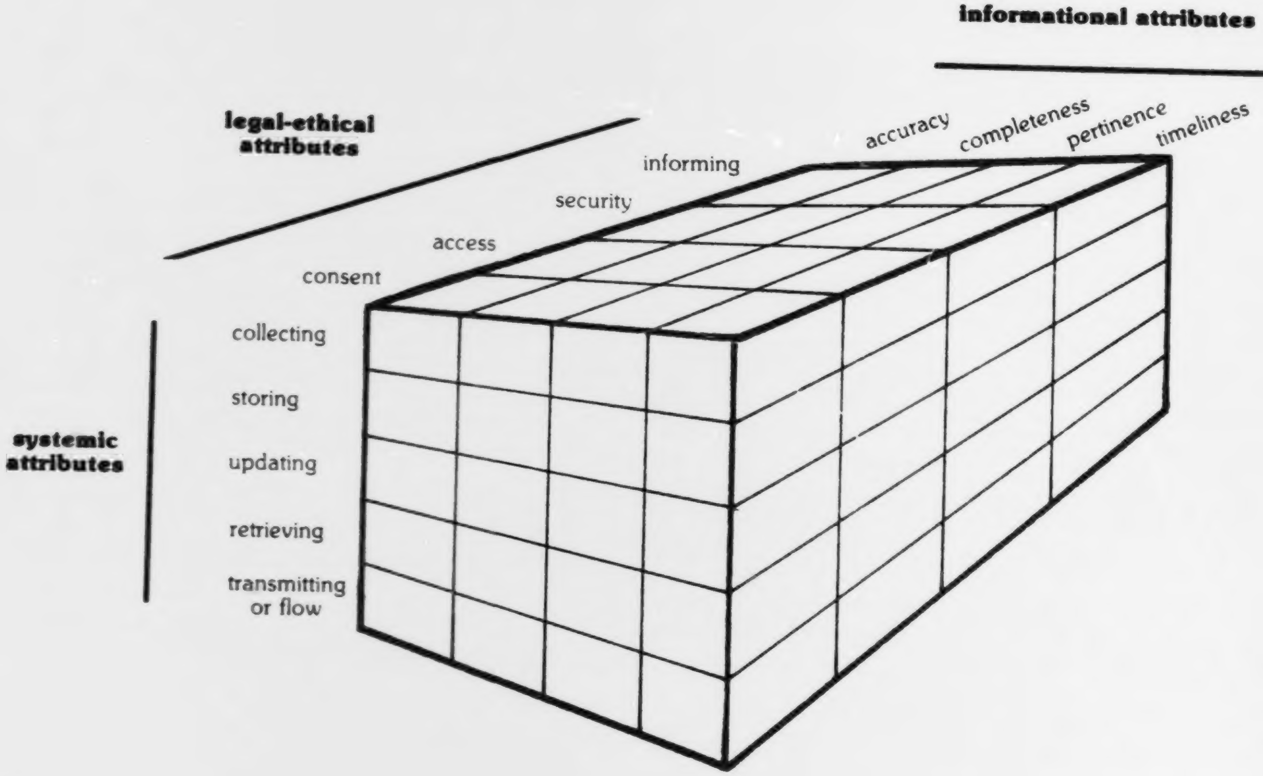
Both Langefors's "object system control" and Martin's "user request designation" are useful to the understanding and conceptualization of information management systems in a complex enterprise such as education. As the object system control shifts from the level of operations to the level of strategic planning, the information requirements shift from being directive to being supportive, and from a strategy which employs pre-defined user requests to one which uses a complete search. The operational specifications of an information system are determined in part both by the characteristics of the object system control and the user request mode. Every information system collects, stores, updates, and retrieves information to enable it to flow from source to user (Hussain, 1973, ch. 5; Padro, 1977). However, depending on its type (directive-supportive and/or user request defined), the mode of operation within these four functions will vary, as will the type of information carried by the system.

A study done by Ligon (1978) indicates that four processes are required to ensure the success of an information system: (i) a study of its feasibility; (ii) an analysis of the requirements of the information system; (iii) the information system's design and programming; and (iv) implementation. Phase 2, the analysis of requirements, would appear to be the most important for this study, since our aim is to establish criteria for the evaluation of an operating system under changing constraints and demands. If a functioning information system serving an organization is to be identified, then it is necessary, according to Ligon, to specify the tasks which are being performed, both in terms of the functions needed to be carried out to complete the tasks and the information produced for and by the tasks (Feinman, Mick, Saalberg & Thompson, 1976).

Other factors to be considered in the study of information systems include the concerns about decay of data quality over time (Zunde & Gehl, 1979), the methods of storing data (Fiester, 1978; Johnson, Giannet & Williams, 1976; Weed, 1969), and the related processes of maintenance control (Braun, 1976; Cooper, 1979), access, and ownership of file contents (Forget, in Murray, 1972). Our review illustrates the three major areas of concern that appear in the literature. The first relates to issues of privacy, confidentiality and the right to know, that is, legal-ethical concerns. The second deals the actual processing of information, that is, concerns relating to collecting, storing, updating, retrieving and transmitting information, i.e., the systemic aspects of information management. The third area relates to the characteristics of the information in the system itself. Each of these issues has been dealt with in previous research reports and will also be dealt with in this study.

III. THE CONCEPTUAL MODEL AND GENERIC ATTRIBUTES

Although ready-made criteria with which to assess the effectiveness of information management systems do exist in the literature, they tend to be content-specific rather than generic in nature. The project team recognized that a critical need existed for the development of explicit criteria which could be applied generally to a variety of organizations requiring dynamic data management, including education systems. To this end, the researchers developed a conceptual framework of information management applicable to information systems involving student and school information. The generic conceptual model of information management systems is presented below in figure 1, and shows three dimensions which can guide judgments on the degree of effectiveness of information management: the informational, the systemic, and the legal-ethical dimensions. The specific attributes which provide the criteria for judging effectiveness are derived from these dimensions and their intersections. The model is designed primarily to assist the manager or information user in gauging whether present systems are able to get the right information to the right person at the right time, and in a form that allows the decision-making to be take place. The criteria for judging the effectiveness of any personal information management system originate, of necessity, in the general structural and functional characteristics of information systems dealing with people. These characteristics, outlined below, can be illustrated as falling within three dimensions, namely the informational, the systemic, and the legal-ethical.


informational attributes
accuracy
completeness
pertinence
timeliness
legal-ethical attributes
informing
security
access
consent
systemic attributes
collecting
storing
updating
retrieving
transmitting or flow

Adapted from Figure 1 in Feeney, J.D., et al. Criteria of Effectiveness of a Student Information Management System. Report #1. Toronto: OISE, 1982.

Figure 1: Conceptual Model of the Intersection of Informational, System, and Legal-Ethical Attributes of Student Information Systems

A. The Informational Dimension

Information can be characterized as having four essential attributes: accuracy, completeness, pertinence, and timeliness, defined as follows:

1. Accuracy: the degree to which the fidelity between the attribute (e.g., a fact, an event, etc.) and the record of that attribute is exact;
2. Completeness: the degree to which sufficient data are available to fulfil the purpose for which they have been recorded;
3. Pertinence: the degree to which data bear directly upon the purpose for which they were recorded;
4. Timeliness: the degree to which data reflect the current status of the subject and are available when required.

B. The Systemic Dimension

The systemic dimension encompasses the technical processes for handling information, and is characterized by five essential processes: collecting, storing, updating, retrieving, and transmitting, each defined as follows:

1. Collecting: the process of gathering from the source those data elements which are recorded values of attributes of a subject;
2. Storing: the process by which data elements are accumulated in a space and medium for later access;
3. Updating: the process by which data elements already collected and stored are added to and/or corrected by using more recent data elements of the same kind;
4. Retrieving: the process by which desired data elements are located and brought from the file for use;
5. Transmitting: the process by which data move internally within the information system itself and internally within the organization, or from the organization to those external to it.

C. The Legal-Ethical Dimension

The legal-ethical dimension contains four elements: consent, access, security and informing, defined as follows:

1. Consent: an act of the will of a person to permit an action, after that person has been provided with sufficient information on the possible implications of the action to be able to assess its consequences;
2. Access: the acquisition of the ways, means or freedom to view, acquire, and/or use information on an individual's record stored in an information system;
3. Security: the protection of information against accidental or malicious loss or damage and/or disclosure to unauthorized persons;

4. **Informing:** **the notification of persons about the existence, purpose, contents and processes relating to the record(s) maintained about them, or in which they have a bona fide interest.**

D. Criteria of Effectiveness

The fundamental question posed by the construction of the conceptual model with its intersecting elements can be formulated as follows: Can we develop from this model an explicit set of policies and procedures to govern each aspect of a model information system? In terms of the systemic dimension, for example, explicit policies on the collecting, storing, updating, retrieving, and transmitting of information are required.

Criteria of effectiveness in information management are, therefore, those which can be related directly to relevant policies and procedures. For example, the criteria for determining effectiveness in the element "collection" (within the systemic dimension) might include the specification of times for collection, data sources to be used, or location of data. The element "security" (in the legal-ethical dimension), to use another example, must connect to explicit policies specifying that information be physically protected, tamper-proof, and replaceable if lost or destroyed. The provision of locks on cabinets, access control devices, back-up files, and so forth may be recommended.

E. Intersecting Attributes

The three-dimensional conceptual model can be used in the following way to judge the effectiveness of the information management system. Management occurs at the points where one dimension intersects or interacts with another dimension. At each interaction point in the model, the effectiveness of the management system can be assessed, as specified in the two-stem questions below.

Intersecting Systemic and Informational Attributes

1. Does policy exist to ensure that the system . . .

2. Do operating procedures exist to ensure that the system . . .

collects	accurate data?
	complete data?
	pertinent data?
	timely data?
stores	accurate data?
	complete data?
	pertinent data?
	timely data?
updates	accurate data?
	complete data?
	pertinent data?
	timely data?

retrieves	accurate data?
	complete data?
	pertinent data?
	timely data?
transmits	accurate data?
	complete data?
	pertinent data?
	timely data?

The combined requirements generated by the intersection of the systemic and informational dimensions can be incorporated into a single set of information system management procedures which requires the data on file to be retrieved, transmitted to source for verification and updating and then transmitted to users in an updated and corrected form. At each juncture (i.e., at the collection, storage, updating, retrieval, and transmission stages), the information is monitored for accuracy, completeness, pertinence, and timeliness.

Intersecting Systemic and Legal-Ethical Attributes

Again, the two-stem questions apply:

1. Does policy exist to ensure that the system . . .

2. Do operating procedures exist which ensure that:

a) the system . . .

obtains consent to	collect data?
	store data?
	update data?
	retrieve data?
	transmit data?
controls access to	collected data?
	stored data?
	updated data?
	retrieved data?
	transmitted data?
provides security for	collected data?
	stored data?
	updated data?
	retrieved data?
	transmitted data?

b) the subject . . .

is informed of	collection of data?
	storage of data?
	updating of data?
	retrieval of data?
	transmission of data?

For this set of requirements to be incorporated into the information management system, procedures must exist which advise the subject of the existence of the systemic functions, including their purpose in the functioning of the organization. In other words, the subject must be fully informed of what is collected, stored, updated, retrieved, and transmitted, and under what conditions.

Intersecting Informational and Legal-Ethical Attributes

The combined procedural requirements generated by the interaction of the informational and legal-ethical dimension are, for the most part, not logically required. Implicit in the subject's informed consent is the assumption that procedures related to the systemic and the systemic-informational attributes exist to ensure the accuracy, completeness, pertinence, and timeliness of the data. It is not judged essential to inform the subject of these aspects of the information system, although clearly they need not be concealed from those subjects who enquire. On the other hand, for security-related reasons, specific and technical procedures, especially in the case of electronically-based information systems, usually must not be revealed to enquirers.

Access to and security of the information system must, of course, function independently of the accuracy, completeness, pertinence and timeliness of the data contained therein.

IV. CONCLUSION

The conceptual framework developed in Report No. 1 and summarized here, together with the attributes generated through the application of this conceptual framework, provide the basis for the focus of work and discussions to be addressed later in this report on issues of student information, student information systems and the management of these systems.

CHAPTER THREE: INFORMATION NEEDS IN DECISION-MAKING

I. INTRODUCTION

This chapter focuses on the information needs of personnel at all levels of the Ontario educational system. Ontario school districts vary widely in population, geographical size, social composition, educational philosophy, and administrative structure. Consequently, proposals must be adaptable to a variety of systems. Nonetheless, it is important to acknowledge that the design of a student data management system is dependent upon its purpose, which in turn depends on the views of education held by the system's users. It is necessary, therefore, prior to the explication of the student information system in chapter 4, to discuss the relationship between these perspectives, decision-making processes, and the needs for student information.

Two basic principles are here proposed. Firstly, student information is collected and retained in schools primarily to improve the instruction of the pupil by helping classroom teachers carry out their duties. Secondly, the information retained in the student's file should form the basis for decisions about that student and his or her program. A set of six conditions which must be adhered to in the school derives from these two principles:

1. Information should be retained in a mode which helps the classroom teacher to make professional judgments;
2. Judgments about the education of the child must be based on information in the student file to which a source can be attributed;
3. Judgments should develop from the sharing and discussion of student information;
4. Reasons for professional judgments should be stated along with the decisions that have been made;
5. Contents of the records must be of high quality, i.e., complete, accurate, pertinent, and timely;
6. Educational milestones and significant events, decisions, and judgments must be included in a comprehensive information system.

The emphasis on the classroom teacher and on other educational personnel as key decision-makers in conjunction with parents/students, as well as the focus on the sharing of data, implies a more explicit and documented decision-making process than is usual in many school boards. We shall, therefore, attempt to analyze the decision-making process and illustrate the information flow. The models presented below are intended to clarify the relationship between information uses and decision-making.

II. THE DECISION-MAKING PROCESS

The development of a student information management system requires a knowledge of the decision-making process, and of the data needs associated with decisions. Stafford Beer's work provides an analytical framework for such a development. Beer (1972, 1979) examined enterprises to determine how organizations are managed. He noted that viable systems carry out similar functions at all levels in any organization, a characteristic which he called "recursiveness." Using Beer's approach in an analysis of several school systems, we arrived at a model of decision-making to be used in the development of a student information management system.

Management of the viable system requires information for two types of decisions, operational decisions and "metasystemic" decisions. The former relate to the everyday activities of each of the operational units of the system. The latter look at the collective needs of the organization, as opposed to the needs of individual units, and also at the management of the organization as a whole, in order to balance future needs against present demands. Effective information processes assist the decision-making necessary to the ongoing operation of the system, and also permit the creation of a balance between the planning and management of present and future activities.

A. Operational Decisions

Operational decisions in education employ information that is directly grounded in the characteristics, activities, and functioning of the operational units, i.e., students, classrooms, schools, and school boards. Metasystemic decisions, on the other hand, employ information that, while based on those same data, applies to groups or aggregates. In this investigation, our analysis concentrates on the individual student at each of the three levels of recursion (classroom, school, and school board) where individual student data are generated. A more complete description of the decision-making process is provided in chapter 4 of Report No. 5.

When data from each viable system in several boards were examined, six possible decisions were identified at each recursive level. These decisions address the following questions:

1. What is the focus of the inquiry about this student?
2. If the focus is on providing discipline, how should the problem be dealt with?
3. If the focus is primarily on attendance, how should the problem be dealt with?
4. If the focus is primarily on learning, what type of program designed to meet the needs of the student?
5. How well is the student progressing in his or her program and are amendments now needed?
6. If the program or the year is complete, should the student proceed to the next unit or grade?

Each of these decisions is represented in each of the three figures that follow. Figure 2 illustrates the six decisions at the classroom level, figure 3 illustrates them at the school level, while figure 4 illustrates the same six decisions at the board level. The figures show that decisions concerning a specific student may be made at each level of the system.

Decision-makers at each level must decide whether the problem can best be dealt with at that level. The teacher should question whether his or her expertise is adequate to the task: if the answer is negative the student should be referred to the school team of which the teacher is a member. The school team assesses the needs of the child and asks where those needs will be satisfied. Referral may move the decision back to the teacher (with assistance) or up to the board's Identification, Placement and Review Committee (IPRC).

Data must be gathered and analyzed in order to resolve the problems posed by each question. Data, once used, are either stored for future use, as would be the case for assessments, or destroyed, as would be the case for minor infractions of discipline. Data used in decision-making may originate in a variety of sources outside the Student Information System (SIS) or from within. The flow of information will be dealt with later in this chapter.

The analysis of decisions by the research team led to the development of sets of input and output data with sources and dispositions identified respectively. These provide an indication of the importance of an effective data management system, as the data needs for various decisions are identified, and as the relationship of data to the privacy and the future of students becomes clear. A detailed account of these data, sources, and dispositions is to be found in the appendices of Report No. 5; they will be dealt with here only in general terms.

A Model of Decision-Making at the Classroom Level

The classroom level of recursion is illustrated in figure 2. While other decisions may be made from time to time, this model identifies those decisions that are made by every teacher about each student placed in the classroom.

The model attempts to permit an examination of the information required for each decision. It also illustrates the flow of decisions as each decision is referred to the appropriate level of the organization, i.e., from the classroom to the school level, or in reverse, from the school level to the classroom level.

A decision is a formal judgment and is depicted in the figure by a diamond shape (< >). At a decision point, a judgment must be made as to which alternative (of those available) is to be chosen. At decision point 0.1 in figure 2, for example, the teacher must decide which kind of problem is being dealt with--a discipline problem, an attendance problem, or a learning problem. The choice determines the next action to be taken.

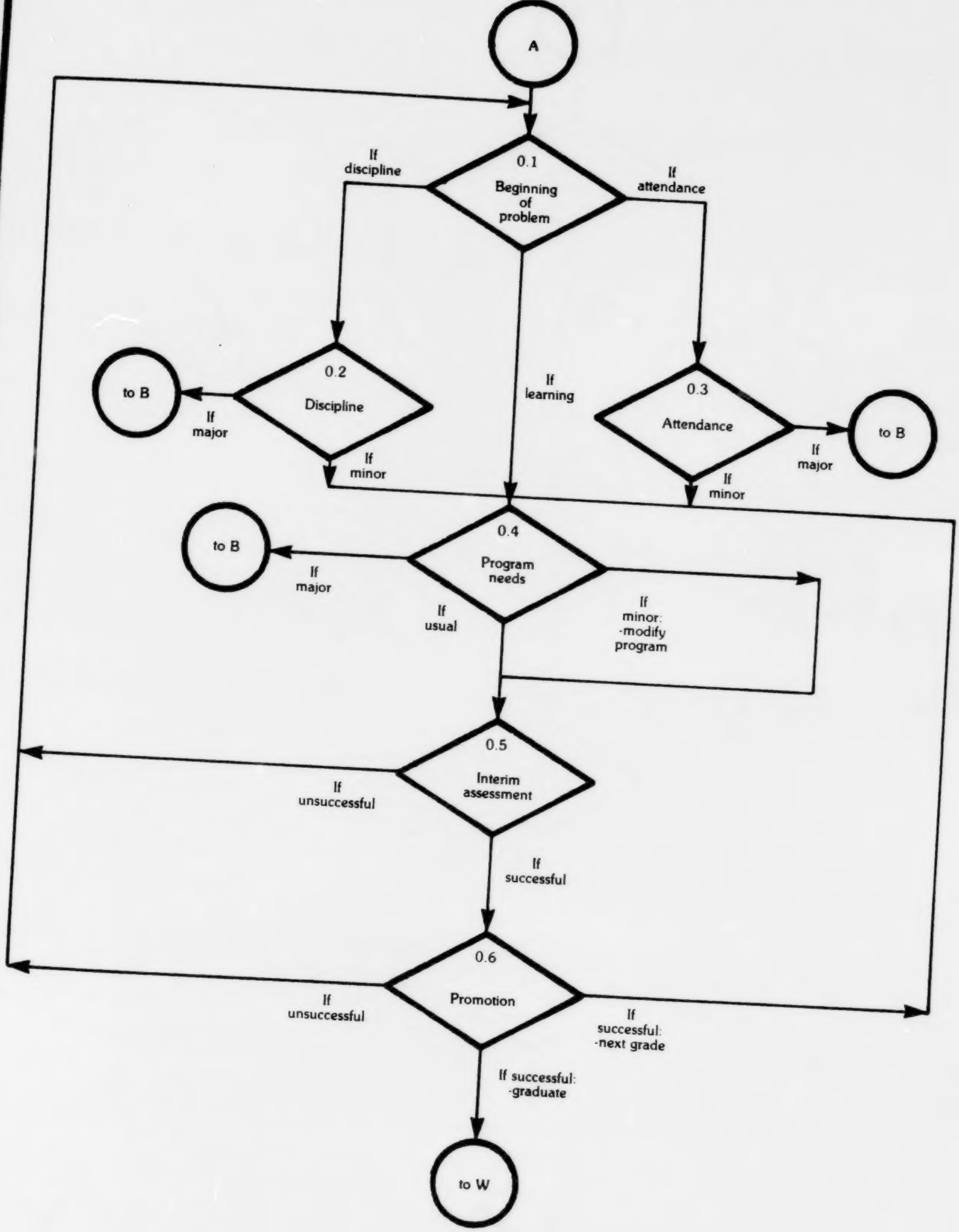

A
0.1
Beginning of problem
If discipline
If attendance
If learning
0.2
Discipline
to B
If major
If minor
0.3
Attendance
to B
If major
If minor
0.4
Program needs
to B
If major
If usual
If minor: -modify program
0.5
Interim assessment
If unsuccessful
If successful
0.6
Promotion
If unsuccessful
If successful: -next grade
If successful: -graduate
to W

Figure 2

MODEL OF DECISION-MAKING AT THE CLASSROOM LEVEL

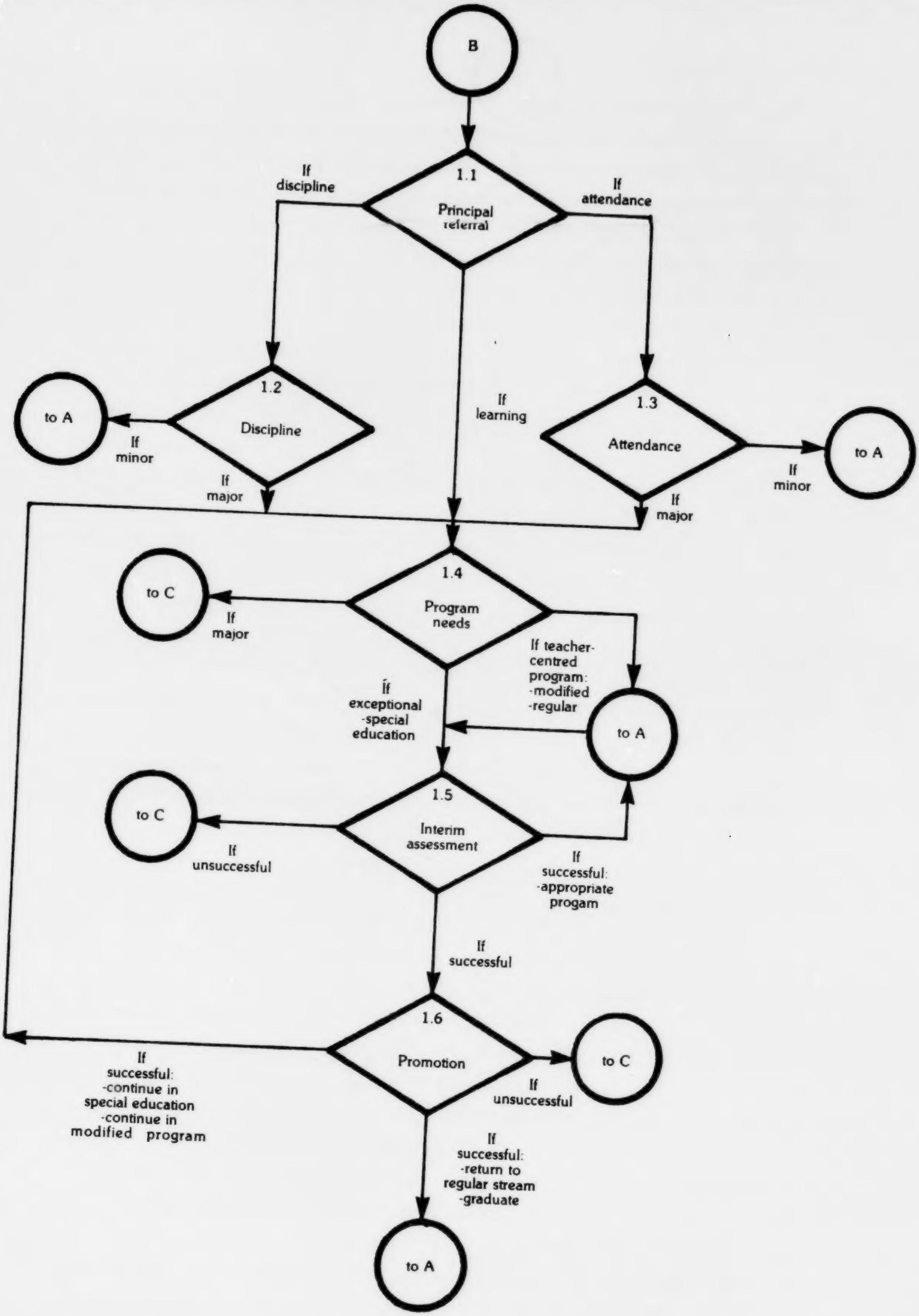

B
1.1
Principal referral
If discipline
If attendance
If learning
1.2
Discipline
to A
If minor
If major
1.3
Attendance
to A
If minor
If major
1.4
Program needs
to C
If major
If teacher-centred program:
-modified
-regular
If exceptional
-special education
to A
1.5
Interim assessment
to C
If unsuccessful
If successful:
-appropriate progam
If successful
1.6
Promotion
If successful:
-continue in special education
-continue in modified program
to C
If unsuccessful
If successful:
-return to regular stream
-graduate
to A

Figure 3

MODEL OF DECISION-MAKING AT THE SCHOOL LEVEL

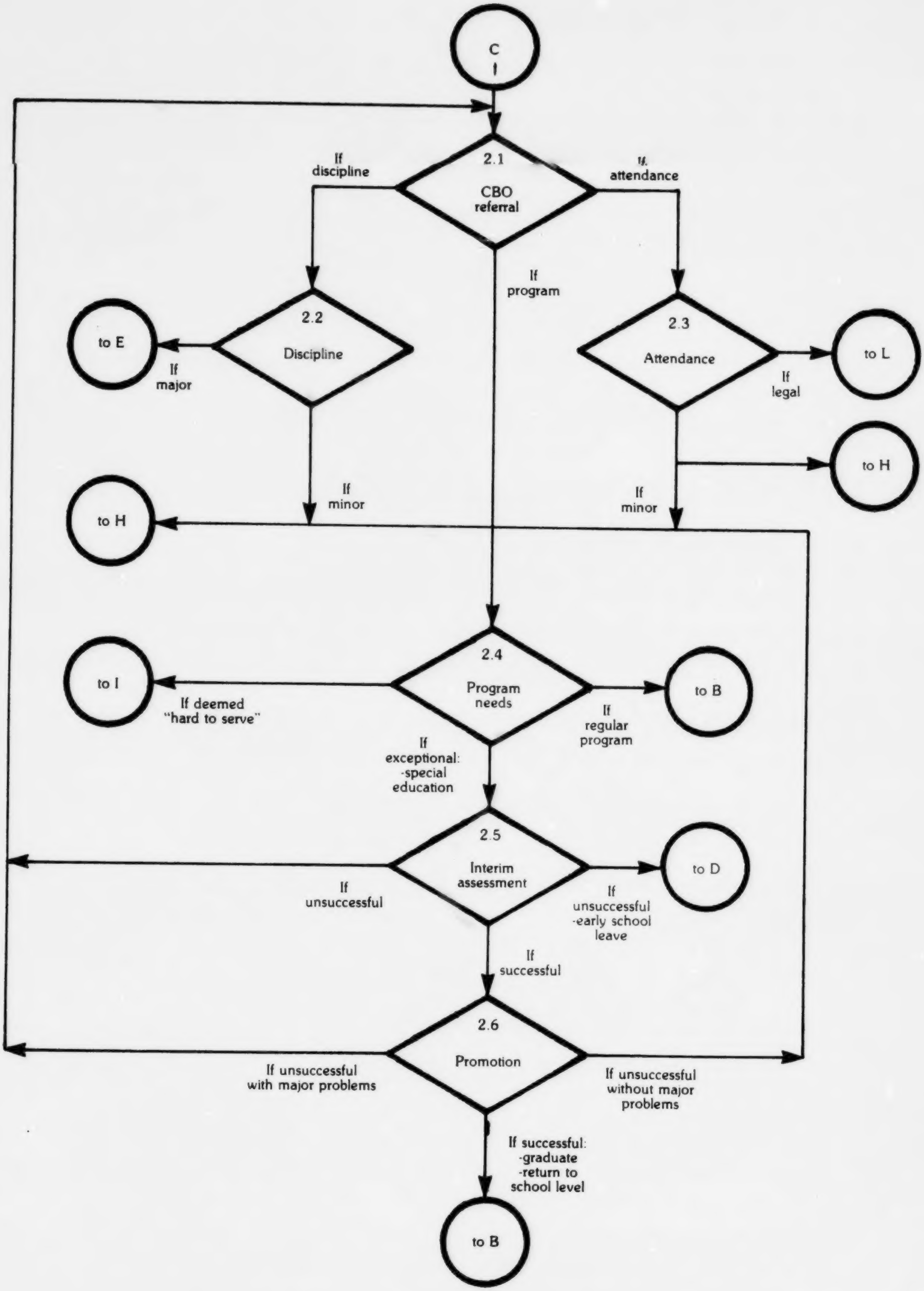

C
2.1
CBO referral
If discipline
If attendance
If program
2.2
Discipline
to E
If major
If minor
2.3
Attendance
to L
If legal
to H
If minor
to H
2.4
Program needs
to I
If deemed "hard to serve"
to B
If regular program
If exceptional: -special education
2.5
Interim assessment
If unsuccessful
to D
If unsuccessful -early school leave
If successful
2.6
Promotion
If unsuccessful with major problems
If unsuccessful without major problems
If successful: -graduate -return to school level
to B

Figure 4

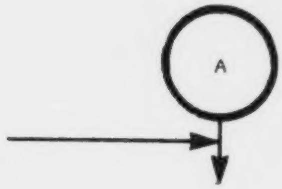
MODEL OF DECISION-MAKING AT THE BOARD LEVEL

Table 1: List of Terms Used in the Decision-Making Models

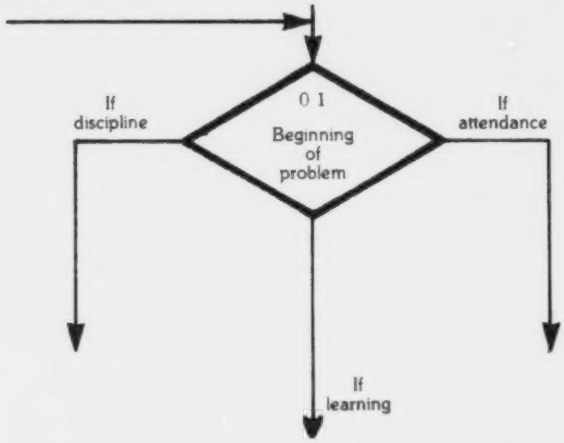
SYMBOL	EXPLANATION
A	Begin--all students begin or are referred back to the teacher at .. A1 .. elementary school .. A2 .. secondary school or grade IX
B	Referral to the principal of the school
C	Initial referral to a central board administrator
E	Expulsion from school
H	Referral of problem to the home
L	Referral of problem to the legal system for court appearance
I	Referral of "hard to serve" child to external agency
D	Referral of child of appropriate age to early school-leave committee
W	Graduation or completion of school career
○	Referral to indicated official or level
◇	Decision as indicated
→	Direction of flow of referral of the issue

Specific data must be obtained prior to any decision being taken. This information must be collected, stored, updated, retrieved, and/or transmitted when necessary. The SIS is developed specifically to provide information relevant to decisions at the time it is required, and in an appropriate form for use. The decisions made by teachers, schools, or boards are the raison d'etre of the information system.

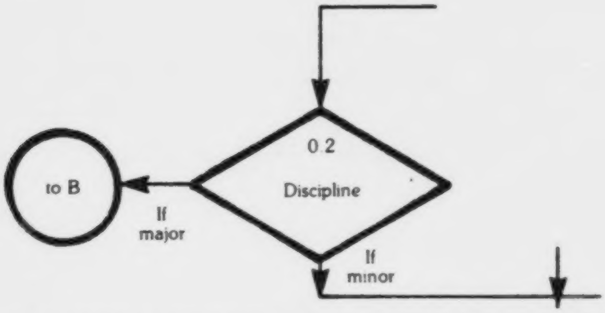
Each decision in figure 2 is explained below, as are the processes of referral to other levels and the passage to subsequent decision-points. Chapter 4 of Report No. 5 deals with this material in greater detail.



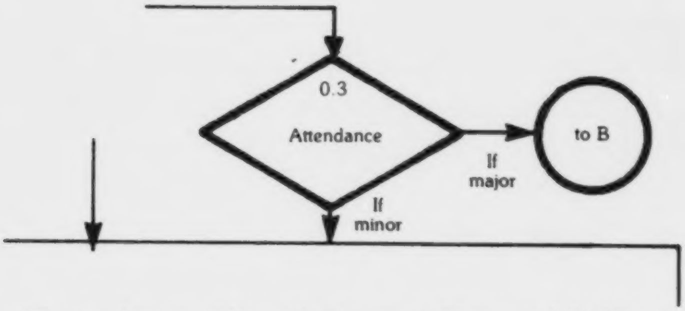
A. All students begin at point A. This includes registration of all students entering the school at any level from junior kindergarten to secondary school. This is the initial information gathering point and the process is usually carried out by the classroom teacher, guidance counsellor, principal and/or school secretary. At this point a student record is initiated.



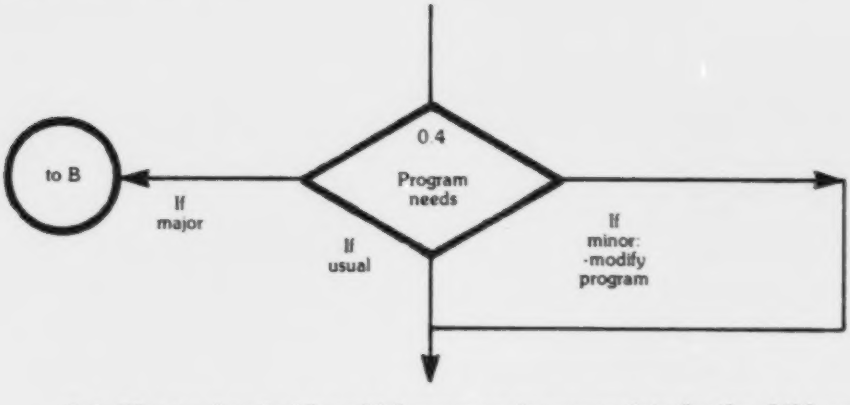
0.1. The teacher decides whether any special needs exist, and carries out an initial classification of the student. If a problem is perceived, it is classified (discipline, attendance, or learning) and a decision is taken at the appropriate point in the process. Early identification and in-transfers are initiated here by assembling data, frequently through the completion of standard information-gathering forms, the requesting of records from a previous school, and/or the carrying out of early identification assessments. The student, having just begun school, completed the previous grade, or transferred into the school, is entered into the class by the teacher.


0.2
Discipline
to B
If major
If minor

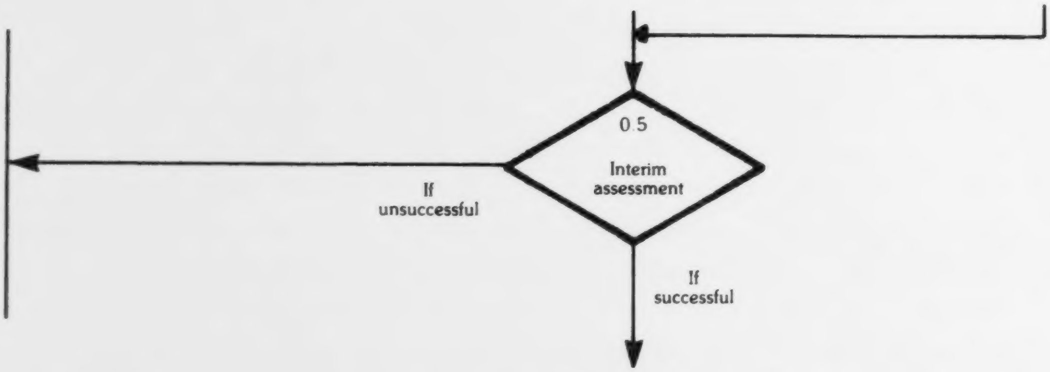
0.2. The teacher considers discipline problems and decides whether they are major or minor. If they are major, the student is referred to the principal or designate (B); if minor, the teacher deals with the issue then must consider the student's program requirements. Few records are established or retained for minor discipline cases, but the teacher may retain an anecdotal record of events.


0.3
Attendance
to B
If major
If minor

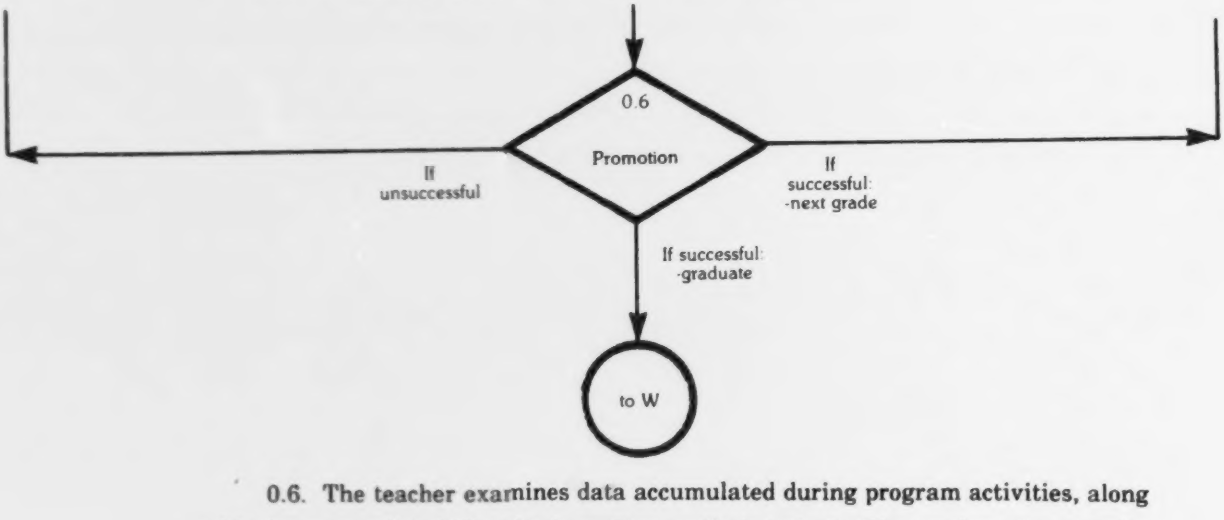
0.3. The teacher considers attendance problems and decides whether they are major or minor. If they are major, the student is referred to the principal or designate (B); if minor, the teacher deals with the issue and then must consider the student's program requirements. A record of attendance, the register, is retained, as may be explanations of absence.


0.4
Program needs
to B
If major
If usual
If minor:
-modify program

0.4. The teacher decides which program is appropriate for the child, or consults with the adolescent student and provides advice. If minor problems exist, appropriate modifications of the program are made. Such modifications may be undertaken with the advice of specialist resource staff who normally visit or are accessible to the school, and/or of administrative support staff. If major problems exist, the child is referred to the school team (B) or to school resource personnel. It is probable that children with exceptional needs will generate substantially more data than will those whose needs are not identified as exceptional.



0.5. Interim assessments are carried out from time to time, as required, to monitor student progress. The teacher decides what information is to be considered and collected in the assessment process, and what use is to be made of the various information elements. On the basis of that information, the teacher evaluates the effectiveness of the program in meeting the needs of the child. Reports of his or her progress are prepared and information is provided for achievement forms and for interested parties, such as the pupil, parents, or principal. If necessary, it is also supplied for the school and school-system identification, placement, and review process. Where interim assessment reveals lack of success, the case is re-examined at point 0.1 to initiate program reassessment and redesign.

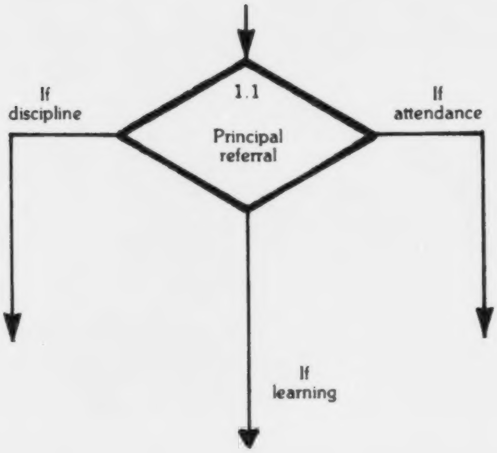


0.6. The teacher examines data accumulated during program activities, along with the accumulated file of information on that student. The teacher also consults with the parent, determines whether the student should be promoted, and initiates reassessment if the student is having difficulties. Such reassessment might result in referral to the school team or the initiation of program modifications at the same grade. Successful program completion at the elementary school level results in promotion to secondary school, and similarly, after secondary school, to graduation (W) and university, college, or employment. Graduation requires appropriate reports by teachers, guidance counsellors, or school administrators.

A Model of Decision-Making at the School Level

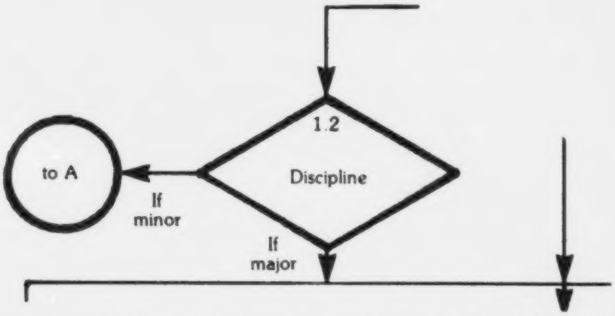
The school level of recursion is illustrated in figure 3, which shows the decisions relevant to specific students made by the principal or by the school committee which acts on the principal's behalf. These decisions have been referred to the principal or school committee by the individual teacher who wishes assistance with assessment, decision-making, program assessment, or resource allocation. In these cases, the student is perceived by the teacher to need extra classroom resources of one kind or another, for the identification or the implementation of the appropriate program. Procedures may involve assessment and may result in referral back to the teacher or referral to a board-level committee (IPRC). Decisions on the specific problem may include the choice of program, the extent of resources or assistance to be given to the teacher and/or student, alternative placement, and so forth. Each decision illustrated in figure 3 is explained below.

B. The principal receives a referral from a teacher or an IPRC, after any of the following decisions: that a child is not exceptional, is best dealt with at the school level, or is now able to return to a school-level program after successful experience in a fully or partially segregated special education situation.



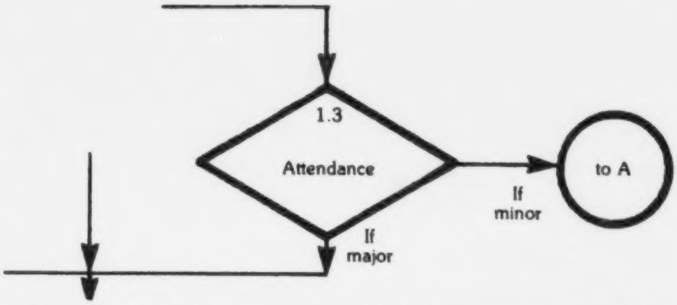
1.1
Principal referral
If discipline
If attendance
If learning

1.1. The principal assembles data for the decision process and classifies problems as relating primarily to discipline, attendance, or learning.



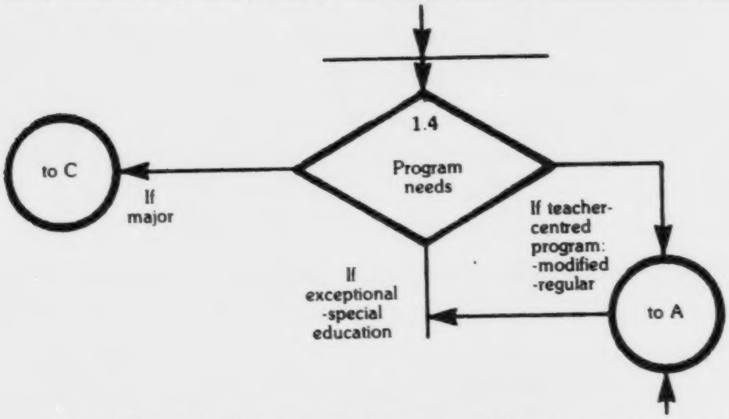
1.2
Discipline
to A
If minor
If major

1.2. The principal or designate considers the discipline problem. If minor, it is attended to and the student is referred back to the teacher (A). If major, necessary actions are taken by the principal and the student is referred to the school committee for consideration of his or her program needs. Data appropriate for decision-making on the problem are assembled.

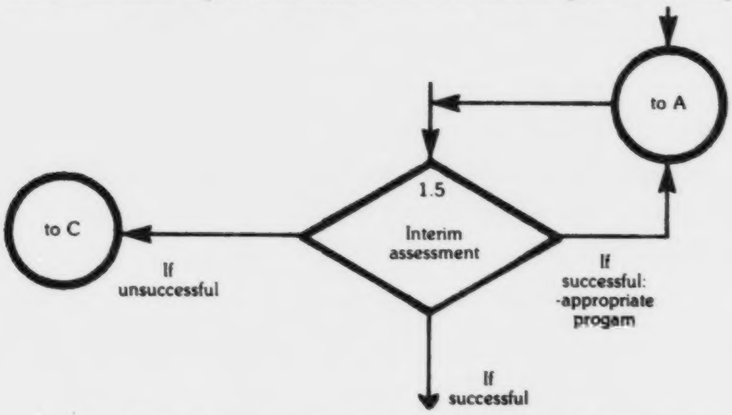


1.3
Attendance
to A
If minor
If major

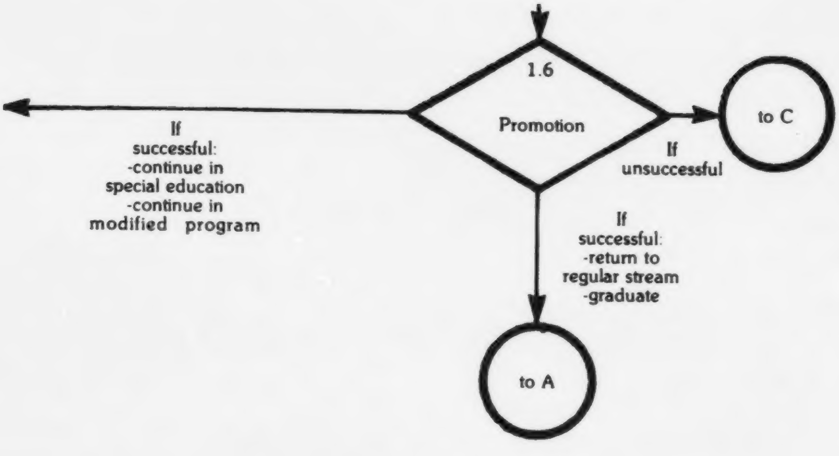
1.3. The principal or designate considers the attendance problem. If minor, it is attended to and the student is referred back to the teacher (A). If major, it is attended to and the student is referred to the school committee for consideration of his or her program needs. Data appropriate for decision-making on the problem are assembled. The principal may notify and/or seek the advice of the attendance counsellor.


to C
If major
1.4
Program needs
If teacher-centred program: -modified -regular
If exceptional -special education
to A

1.4. The school team receives the referral, considers pertinent data, calls required staff specialists, obtains necessary consents, arranges for other necessary data, decides whether the child is exceptional, and decides whether classroom, school, or board resources are adequate to serve the child's need. The team prepares the program decision report, prepares the teacher for program implementation, obtains necessary consents, and makes and recommends the implementation of program decisions. Modified programs are prepared by the classroom teacher (A) and implemented where indicated, or placement in special education classes or facilities is arranged. If a major problem is evident from the data, a referral to the board program decision body (IPRC) is made (C).
Documentation of previous decisions and of current processes is supplied.


to A
to C
1.5
Interim assessment
If unsuccessful
If successful: -appropriate progam
If successful

1.5. The school team monitors the progress of the student on an ongoing basis, by assisting the teacher in his or her evaluation, and by providing specialist assistance in the assessment of progress. Reassessment of program decisions is made from time to time to determine the effectiveness of the program and to report on the student's progress. Interviews with the appropriate persons are carried out. If the program is considered to be unsuccessful, a referral to the board program decision body (IPRC) may be made (C), but if it is considered to be modestly successful, although requiring modification, these are carried out by the teacher (A). If the programs are successful, the student carries on to the appropriate promotion processes.


1.6
Promotion
to C
If unsuccessful
If successful: -continue in special education -continue in modified program
If successful: -return to regular stream -graduate
to A

1.6. If the pupil is successful in the program, promotion may lead to graduation from the school, the return to a regular program under the control of the teacher alone (A), or continuation in the present program, that is, either a modified regular program or a special education program with such adjustments as are considered necessary. If the program is considered unsuccessful, referral to the board program decision body (IPRC) for reassessment would follow (C).

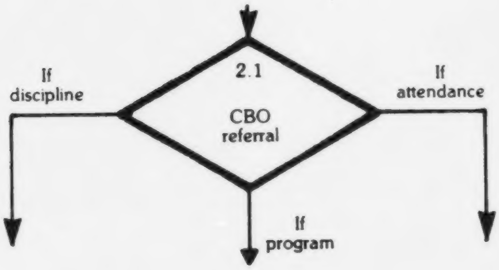
A Model of Decision-Making at the Board Level

The board level of recursion is illustrated in figure 4, which shows the decisions relevant to the individual student made by a central board committee (IPRC). Students with possibly exceptional needs are referred to the central board IPRC because the school lacks the skilled personnel, expertise, or resources to assess and identify student needs adequately at the school level or provide a program that would be suitable to meet those needs.

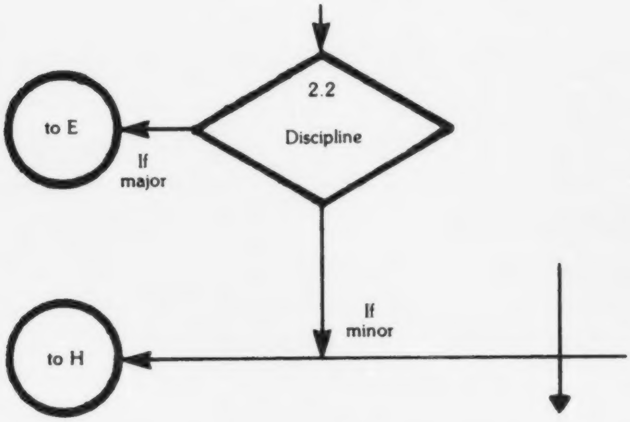
A referral to the central board IPRC occurs for only a minority of students, when resources available at the school level are inadequate or not sufficiently sophisticated. The IPRC may cause the student to be further assessed, to be referred back to the school with or without advice, to be placed in an appropriate program, or to be reviewed in a functioning program that is amended or modified; it may also request that resources of a specialized nature be provided, or it may proceed to have the student declared "hard to serve" under Section 34 of the Act.

Each decision illustrated in figure 4 is explained below.

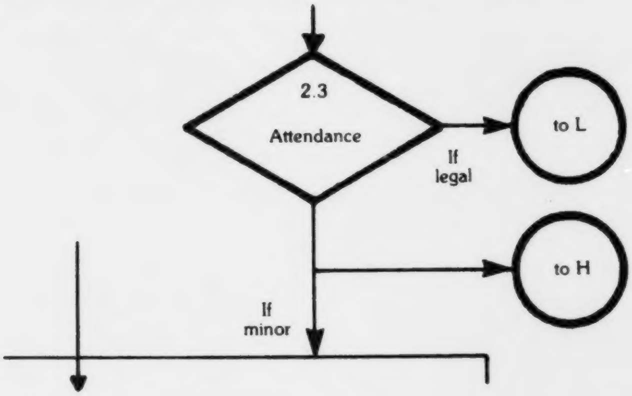
C. Referrals from the school level to the central board office (CBO), or to the area office of a large board, initiate the board-level processes for data development and decision-making. Referrals occur when sufficiently sophisticated resources, personnel, assessments, programs, or facilities required to meet the needs of the student are unavailable at the school level.



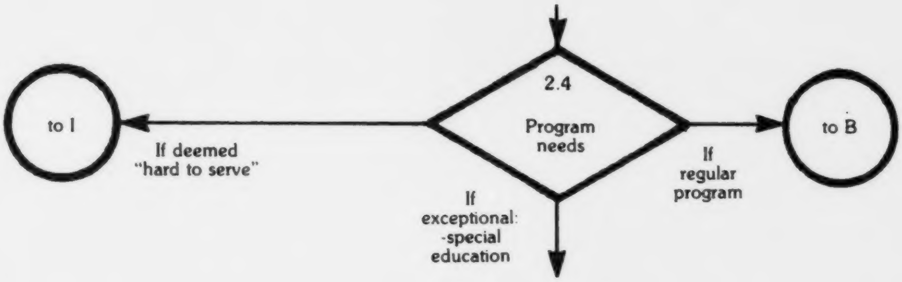
2.1. The superintendent or designate decides on the appropriate route for referral. Problems are dealt with by the superintendent if they involve a disciplinary matter, by the attendance counsellor if an issue of attendance, and by the central board office's (CBO) Identification, Placement, and Review Committee (IPRC) if related to the learning or special service areas. Whatever data are required to consider any exceptional needs are assembled for the IPRC.



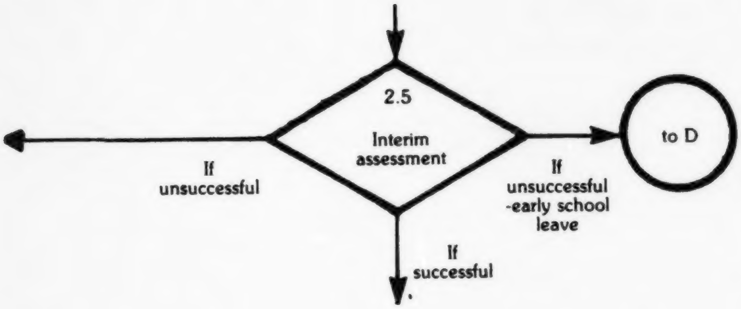
2.2. The superintendent is notified of actions leading to suspensions, receives notices of appeal, informs the board of relevant circumstances and considers expulsions in extreme disciplinary cases. Where the program may be a factor, the referral is sent to the IPRC. The home is notified of significant problems (H). A pupil may be expelled (E) after being notified of his rights, after recommendations of action, and after the convening of a hearing. The board may reinstate the student and expunge all information about the expulsion from the record.


2.3
Attendance
If legal
to L
to H
If minor

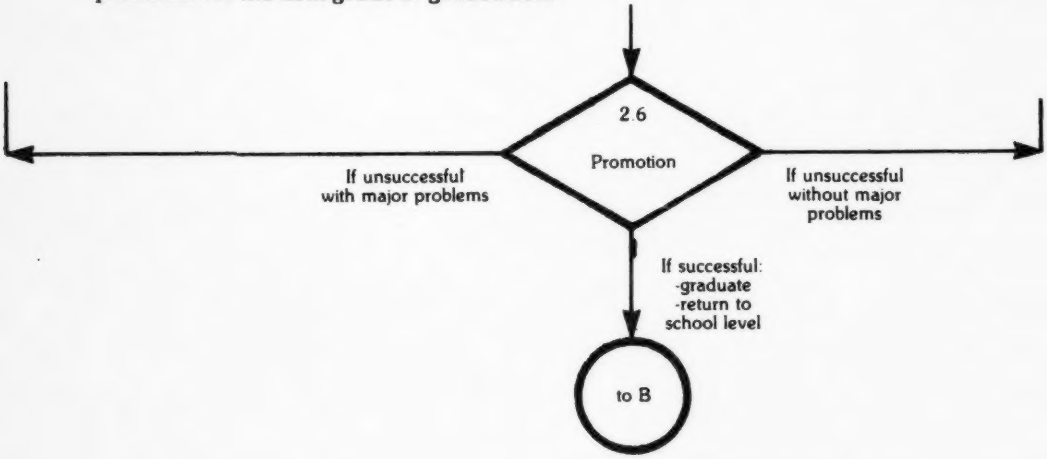
2.3. Referrals to the attendance counsellor result from persistent truancy or patterns of absence. Attempts to resolve these problems may involve home interventions (H), court appearance (L) and/or IPRC program redevelopment. The attendance counsellor should develop a file related to the case sufficient to support any proposed actions. Notifications of actions, warnings and advice are sent to parents.


to I
If deemed
"hard to serve"
2.4
Program
needs
If
exceptional:
-special
education
If
regular
program
to B

2.4. The IPRC considers the placement of students in need of specialized services and programs. It carries out in-depth assessments of students or refers them to other agencies for assessment prior to their identification as exceptional or to their placement. It makes referrals to external agencies (I) for "hard to serve" pupils, places students in specialized services within the board, and reviews the placements periodically. It ensures the availability of appropriate services on a system-wide basis. The board program department considers the need for new programs across the system and conducts evaluation procedures as necessary.


2.5
Interim assessment
If unsuccessful
If unsuccessful -early school leave
to D
If successful

2.5. Assessment of the progress of a student is carried out periodically to confirm the suitability of his or her program. Where a program is unsuccessful, adjustments are carried out as required after an analysis by the IPRC. Students who are unsuccessful in a program, and, most importantly, who want to leave school, may be referred to the Early School Leave Committee (D). Where the program meets the needs of the student, he or she continues in the program and is assessed for possible promotion to the next grade or graduation.


2.6
Promotion
If unsuccessful with major problems
If unsuccessful without major problems
If successful: -graduate -return to school level
to B

2.6. A review of each program is carried out periodically through a full examination of the effectiveness of the placement. Where a program is unsuccessful and substantial problems are encountered, the pupil is referred back to the CBO and IPRC for analysis of the problems and for changes or adjustments of the program. Where the program is only modestly successful, it may be re-examined to assess the need for program changes. If the program is successful, the student may graduate or may return to a more integrated learning situation (B), as the conditions originally requiring segregation are ameliorated. Where a return to the school takes place, the school team will carry out adjustments of the program from time to time as necessary.

B. Metasystemic Decisions

A number of decisions that rely on student information were not included in the decision-making models above. This exclusion was not an oversight, but rather an attempt to retain the simplicity of the model presented, and to focus on the student-centred decision-making process. Nevertheless, consideration must be given to information needs that relate to metasystemic decision-making. Essentially, metasystemic decisions are managerial decisions about present operations and future development.

Data Needs at the Classroom Level

Management of the classroom by a teacher balances the needs of the present against those of the future, and the needs of one child against the resources available for all children in the class.

At the teacher or classroom level, metasystemic decisions deal with questions such as the following: "What available resources do I as a teacher need in order to accommodate all the needs of this group of students?" "How will I arrange my timetable to accommodate the needs of this group of children?" "What documentation will I require to justify the resources necessary for this range of teaching strategies?" "How well is this set of strategies working for the exceptional children in the class as well as for the others?". While this kind of question is one step removed from the individual child, that is, the questions are metasystemic, it nevertheless requires information that relates specifically to each child, to his or her needs, and to his or her progress in the classroom. Without such information the teacher is unable to plan future classroom activities and curricula, to secure resources, and to exchange services with other teachers in the school.

To make these decisions, information is required. This management information is developed from data similar to those used for individual decisions, but it is compiled differently, must be available in a different format, and addresses different issues.

Data Needs at the School Level

Data in the form of statistics inform the principal of the numbers of students in each class in the school, probably with the number of exceptional children, if any, and of the resource needs associated with students with special needs. This information permits the principal (or school management council) to allocate resources, assign new students, arrange planning opportunities, and assign space, facilities, equipment, and services to accommodate ongoing operational needs. The data facilitate the effective allocation of school resources among the competing needs that exist in the school situation. In essence, the data should permit the principal (or management council) of the school to "manage" the resources of the school to meet its current and future needs.

Data on all students and on the decisions arrived at by the school team permit resources of the school to be allocated as required. They permit the management processes of the school to place the needs of individual students within the context of the overall needs of the school. These data furnish an historical record of the effectiveness of certain types of programs in meeting related types of needs. Where needs are not being met, they permit the development of new initiatives and the reallocation of resources that are not being effectively employed.

Data Needs at the Board Level

Data in the form of statistics provide information on the frequency or prevalence of various student exceptionalities in the board as a whole and on the services which are required by the existence of those needs. These data permit the allocation of the system's resources among the schools competing for services that are provided at the teacher or school level. Furthermore, they provide the basis upon which estimations of changing demographic conditions, new student needs, and changes in needs can be made. They support the system-wide planning and development required to provide for future needs.

A board must be able to assess the ongoing effectiveness of all its activities. Standardized testing programs have traditionally been periodically initiated to determine the effectiveness of the programs offered by a school system. While these may have some value, a more systematic development and use of information for program and individual assessment purposes would be more effective. Board-wide evaluation implies the need for data-handling processes that would be available only through the computerization of student data. Such an approach requires a more sophisticated definition of specific information requirements and of the systems to control information management. The need for systems to deal with the larger quantity and the significantly different types of information is evident. With this in mind, the following recommendations have been made.

Recommendation 1: that the Ministry of Education define a new integrated Student Information System (SIS) by consolidating existing and proposed legislation.

Recommendation 2: that the Ministry of Education provide guidelines for the implementation by school boards of all aspects of the redefined SIS.

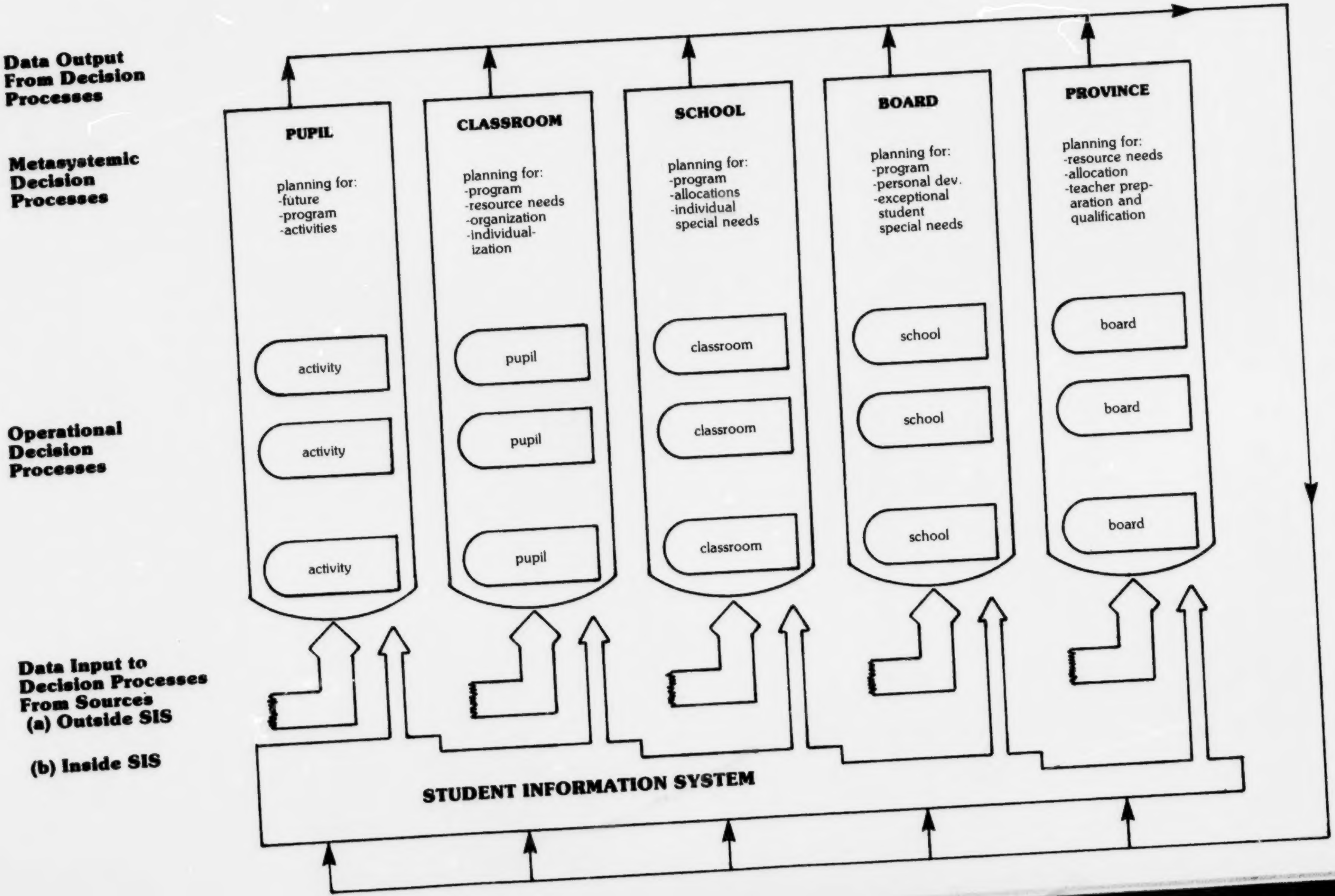
Recommendation 3: that the Ministry of Education allocate resources for the implementation of the redefined SIS as a priority.

C. Flow of Information in a Recursive System

Figure 5 illustrates the five recursive levels: pupil, classroom, school, board and province. Each "viable system," for example, the pupil, is represented by the adapted rectangle. Within each of these viable systems are listed the decision areas of the system, with the metasystemic decision areas at the top and the operational ones (each a viable system) at the bottom. The diagram illustrates that each viable system is

Figure 5

FLOW OF INFORMATION WITHIN A RECURSIVE DECISION PROCESS


Data Output From Decision Processes
Metasystemic Decision Processes
Operational Decision Processes
Data Input to Decision Processes From Sources
(a) Outside SIS
(b) Inside SIS
PUPIL
planning for:
-future
-program
-activities
activity
activity
activity
CLASSROOM
planning for:
-program
-resource needs
-organization
-individualization
pupil
pupil
pupil
SCHOOL
planning for:
-program
-allocations
-individual special needs
classroom
classroom
classroom
BOARD
planning for:
-program
-personal dev.
-exceptional student special needs
school
school
school
PROVINCE
planning for:
-resource needs
-allocation
-teacher preparation and qualification
board
board
board
STUDENT INFORMATION SYSTEM

composed of a metasystem and several lower-level operational areas and that each lower-level viable system is part of a higher-level viable system, i.e., several classrooms are subsumed under a school. Each of these viable systems employs information in its decision-making process.

In the diagram, information for decision-making arises from two sources. The first source includes a large number of contributors such as pupils, parents, teachers, specialists, administrators, and agencies. This information is represented by the right-angled arrow leading into the lower parts of the viable systems. These sources initially provide all the data input but as time progresses the information is retained in the SIS and accumulates for later use. This bank of retained information is the second source for decisions. These data, collected and retained, are the contents of the SIS, accumulating over time and acting as the major contributing source of the data used in making decisions about students.

Information enters the SIS from the subsystems which collect, use, and generate information from their ongoing activities. Each level of the school system feeds information into the SIS and each level retrieves information appropriate to its needs. Information is moved through the network between elements and within the SIS and between the systems within different boards. Information input and retrieval is controlled by systems within the SIS and in keeping with legislation, policy, regulations, and operating procedures. The SIS is a total system that enables personnel to collect, store, update, retrieve, and transmit necessary information to all parts of the school system in keeping with monitored technical and policy controls.

Recommendation 4: that the Ministry of Education define the network in Ontario within which the SIS will function.

Recommendation 5: that the Ministry of Education provide guidelines to school boards on the nature and use of the network.

III. TYPES OF STUDENT INFORMATION REQUIRED

The type of information needed for effective decision-making depends upon the roles educators play, the decisions they make, and the level of the system at which the decision is made.

(1) Classroom teachers devise individual programs, monitor the student's performance over time, and adapt programs to the student's progress. Information necessary for this decision-making might derive from teachers' records, parents' knowledge, profiles of the child's learning and behavioural characteristics, reports of health or social characteristics, assessments by specialists, and observations by and judgments of teachers and special consultants.

As well as preparing and executing plans for educating individual students, however, teachers must manage the education of all students in the class. This requires data which reflect the collective class status. The teacher requires individual student data in statistical form and in aggregate, comparison and time series. Such data will permit the supporting of requests for resources, specialized personnel or equipment. It arises from the same data on individual students but links the information to provide an overview or profile of the class. Further, it permits the teacher to see his or her class in comparison with norms that have been developed in the past from similar classes. Thus, metasystemic as well as operational decisions can be made with similar data that are analysed in different ways.

(2) School decisions may involve teachers, consultants, and auxiliary service personnel who ideally rely upon descriptions of the child's educational and related capacities, on opinions of those who work with the child, on program plans and children's responses to them, and on information from parents and family.

Here again, the school will need to develop a data base that permits the management of the school learning environment. Individual data are required to manage each student's program, but the planning necessary for effective school management also rests on the same data, which reveal the prevalence of particular exceptionalities and conditions and the numbers of pupils in classes, and record placement and programs. Data about the specific needs of students assist in securing appropriate resources. Thus, the data base arising from individual student data will serve multiple purposes if suitable statistical packages are available and utilized.

(3) Central board decisions involving the principal, learning resource teachers, special service personnel, or superintendents may lead to specialized placements, referrals to outside agencies, or legal actions. Collective decision-making ideally would employ information derived from parents, classroom teachers, consultants, system specialists, and from outside agencies that have conducted assessments or provided treatment to the student.

Along with such data, the school board should have access to data based on individual student information which will permit the determination of the effectiveness of the various means employed to meet student needs. These data can be developed through the collection, over time, of experiential data accumulated by the careful monitoring of individual programs.

(4) Parents ideally play, and are assisted in playing, a significant role in the decisions that affect their children's education. They require information to gain an overview of their child's current and previous performance, to broaden their understanding of milestones and progress, and to present their perspectives to decision-makers.

IV. CONCLUSION

Chapter 4 has attempted, after considering the educational decision-making implications of Bill 82, to specify the information needs of teachers, parents, students, learning specialists, and those administrators who make decisions about children's education. To accomplish this task, the study team examined, in a number of school systems across Ontario, the decision process that occurs in classrooms, schools and school boards concerning the progress of individual students. From this examination a model was developed which, in simplified form, illustrates the decisions that must be taken for or with each child as he or she proceeds through school. The model in turn yielded a set of information inputs necessary to allow decisions to be made about children as individuals, in the classroom, on occasion in the school, and possibly in the school board. The types of information demanded at various decision points in a child's school career form the basis of the SIS.

Further to the analysis of decision-making related to the individual student, data required for the effective management of the classroom, school, and school board were considered in order to discover the information needs that arise from metasystemic decision-making. Information for these decisions was also found to rely to a large degree on the data that originated from individual student decision-making. Thus, a central thesis of the study is that the student-based information system makes an effective decision process possible not only at the level of the individual student, but also at the managerial level. These managerial decisions are clearly important for the delivery of services to all students.

Recommendation 6: that the Ministry of Education define the specific types of information about a student that shall or shall not be collected.

Recommendation 7: that the Ministry of Education provide detailed guidelines to school boards for the interpretation of these types of information.

This chapter has provided a model of the decision-making that occurs in Ontario's school systems, illustrating the types of information necessary for operational and metasystemic decisions at three levels of recursion. Recommendations in subsequent chapters propose an integrated infrastructure to provide the information necessary for effective data-based decision-making.

CHAPTER FOUR:
PURPOSE OF A STUDENT INFORMATION SYSTEM

I. INTRODUCTION

In this chapter, discussion of education information management systems will provide the basis for the development of a model for the design, use, and evaluation of such systems. While this model incorporates features derived from successful practice in Ontario school boards, it should be noted that, unlike chapter 3, this chapter is not based on, nor does it report, empirical findings. It does, however, prepare for their use by establishing a substantive position on the types and purposes of information appropriate to any student information system.

While it is recognized that any system designed to manage education information derives, in large measure, from a specific information system, the three generic dimensions of information management detailed in chapter 2 must, of course, form the basis of this discussion. The structure of any given information system, however, also rests on the purpose for which that system is established and on the types of information used. Hence the construction of a model for student information management must begin with a definition of purpose and a statement of the types of information to be used in such systems. Such purposes and the information needs implied by them have been outlined, in part, in the discussion of the decision-making models in chapter 3. Here, they will be presented in summary form only, as more detailed analysis can be found in Reports No. 2 and 5. The decision-making models of chapter 3 and the arguments below provide the foundations for the models of student information management subsequently developed in this report.

II. USERS AND TYPES OF STUDENT INFORMATION

A. Users

As has been noted above, this study is founded on the assumption that the primary user of student information is the classroom teacher, the guidance counsellor, and/or the special education teacher, the person designated by the school system to carry the basic responsibility for individual members of a class. Thus, the information that a student information system collects and uses should enable that teacher to work effectively. Much of this information is also likely to be useful for other legitimate education-related purposes and to other educational personnel, so that several purposes are often served by one set of data. In cases where data are collected for the use of personnel other than the classroom teacher, however, the information should be included in an integrated information system, one that is designed first and foremost to meet the classroom teacher's requirements. Thus, other users should work within the information retention structures appropriate to the primary user, the classroom teacher: this follows logically from the fact that our educational system is based on the classroom delivery of school services. To effect this, this report has proposed the creation of an integrated Student Information System (SIS) through the consolidation of existing and proposed legislation.

The question of purpose is closely related to that of use, and it should be emphasized that the information gathered about a student by a school system should be the sole basis of decisions made about his or her program and progress. No judgment about placement, curriculum, or the educational needs of any child can be made without the provision of prescriptive data and/or the source of evidence being made available in the file to facilitate such judgments. This principle supports the current laudable moves toward accountability in education. Implementing the principle requires, moreover, a greater sharing of information among those concerned with the education of the individual student, as well as a definition of the process by which judgments can be made on the basis of shared and jointly considered information. Thus, the reasons for the particular administrative decision (e.g., to promote a student) should be stated (e.g., "He or she made satisfactory progress through the grade 5 curriculum"), and be related to specific data (e.g., marks on tests, completion of projects, comprehension of materials). The principle of providing and using information to inform decision-making is equally important when making a statement such as "The child does not apply himself or herself." Such a judgment requires illustrations of the particular patterns of behaviour, observed by the teacher, which led to that judgment. Ideally, of course, such an assessment would also be accompanied by suggestions of future measures to be taken, but whatever the nature of the judgments, the information system should be able to provide the materials to enhance decision-making in this way. Thus, the student record should provide evidence that a child does or does not complete assignments, does or does not comprehend the mathematics curriculum, and so forth.

Implicit in the major emphases outlined above, but sufficiently important to require separate discussion, is the dynamic decision-making function of an information system. The classroom teacher and others contributing to and using the information system are viewed as decision-makers; the basis of their decision about a child's program and process is information contained in the record, and along with it either a source reference for the decision, or a record of its rationale. For this reason, accuracy, completeness, pertinence, and timeliness of the information available in the record is of the greatest importance. Also implied above is the need for education systems to make the process of decision-making more explicit, and therefore comprehensible and defensible.

School systems, however, must also make decisions not directly related to individual students, although they are relevant to the delivery of appropriate educational services. These more wide-ranging or system-wide decisions must also take account of student data, although frequently in aggregate form. Such decisions may occur in program development, planning for transportation and facilities, evaluation of systems and processes, or in decision-making on other metasystemsic issues. In such situations, the individual student data are not considered independently, but are nonetheless fundamental building blocks in the statistical analysis essential to effective decision-making, and as such, must be accorded the same care and protection granted to other student data.

B. Types of Information

It has been suggested that the information contained in a student information system should provide a comprehensive record of a child's educational milestones and of the significant events, decisions and judgments relevant to his or her educational program. Although the information compiled by an information system devised for a given jurisdiction (province, board, school, or class) will obviously be unique to that system and to its particular requirements, goals, and personnel, our research has identified the major objectives of the decision-makers, as well as the types of information required for decision-making. A summary of the types of data required by four categories of decision-makers, namely teachers, principals, other administrators, and parents, will be presented below.

In cases where the teacher is the primary decision-maker, information is gathered to make decisions to meet a child's educational needs, to devise an individual program, to monitor ongoing performance, or to adapt a child's program to align with his or her progress. Types of information might include: successive program plans, coupled with details of the child's performance; successive judgments of the child's past achievements and statements of his or her current abilities and disabilities; health/social information if relevant; requests for services, advice, or assessment; and identification of exceptionalities. Typical sources of information might include parents, teachers' records (judgments, observations, rationales, descriptions of the child's performance), and reports by assessors.

Where the decision-maker is a teacher receiving new children, a basic purpose of this information would be to provide an initial program plan including curriculum content and expected skill acquisition, and to suggest teaching approaches. Types of information would include an educational profile of the child's learning and behavioural characteristics, and a statement of his or her needs, past school history, and performance. Sources would be reports (by previous teachers, consultants, principals, and auxiliary personnel) including descriptions, opinions and rationales for suggested strategies and placements, as well as comments by parents.

Consultants and auxiliary service personnel may require an overview of a child's history in order to advise principals or the school board on his or her educational program, to make recommendations to teachers about specific programs or placements and to consult with parents about the child's program or placement. Types of information would include descriptions of the child's educational performance, including the opinions of those who have worked with and are working with the child, program plans, including a description of the child's response to them, adaptations to plans, and information about the views and concerns of parents and family. Typical sources would be reports and descriptions by teachers, principals, consultants, and auxiliary personnel, and reports on interviews with parents.

Decisions by principals, heads of special services, or superintendents typically require information: to gain an overview of a child's current and previous educational performance in order to place a new child in a program; to communicate with outside agencies; to refer a child for consideration for special education programs; to place a child in an appropriate setting after assessment; to arrange a review of a child placed in a regular or special education program; to arrange transfers into alternative programs where appropriate; to make decisions about "hard to serve" children; to provide summary information for outside auxiliary agencies; and to deal with appeals. The types of information required to make such decisions are similar to those listed above, but will need to include descriptions of a child's previous programs, with an account of placement/program rationales and performance data, together with conclusions drawn from assessments, and referrals provided by the child's current and previous classroom, auxiliary, and special education teachers. Data would be obtained from reports from teachers, principals, consultants, psychologists, school nurses, assessors, placement committee deliberations, and parent interviews.

Administrators at the school, board and ministry levels of the educational system might require information for metasystemic decision-making and planning for personnel, facilities, transportation, program funding and/or budgeting. Aggregate quantitative information derived from the records of total populations or from statistical analyses based on samples of populations or records would be the types of information generally required.

Where parents are involved in decision-making, information might be needed to give them an overview of their child's current and previous educational performance, to help them prepare when faced with an educational milestone or significant change, such as a transfer to a new program or placement, or to assist in classroom decisions, consultation, and appeal. The types of information would include descriptions of and opinions on the child's current and previous educational performance, and rationales and objectives for proposed educational programs.

Finally, where appeals are being prepared or have been initiated, parents and board personnel require access to the documentation of processes and data employed during the decision-making processes. The information required might include dates of the decision, notices and records of attendance at decision-making meetings, data considered in reaching decisions, and dispositions of and reasons for the decisions taken. Such data should be collected routinely and be available equitably to both parents and board personnel, as specified in the Education Act and in relevant regulatory and policy statements.

C. The Student Information System (SIS)

To retain student information that will accommodate the many users and the variety of purposes that are noted above, a student record of substantial import will be required. The record's design must be carefully considered to ensure the protection of confidentiality and to provide the means of effective and appropriate use. Effective use of student information depends upon it being available to users at the right time and in a format that is appropriate for decision-making. A set of processes designed to collect, store, update, retrieve, and transmit data as required must therefore be established. These five processes have been discussed under the heading, "The Systemic Dimension" in chapter 2. Here we will proceed to discuss the development of a student information system designed to meet the criteria for effective management set out in that chapter.

The student information system (SIS) proposed in Chapter 3 consists of a set of elements, i.e., individual data files with control mechanisms, which will provide the data required by the decision-makers discussed above in this chapter. The basic premise of this study is that the primary decision-maker, the classroom teacher, must find the system relatively easy to work with and helpful in carrying out classroom duties. That being the case, the system must employ elements that are accessible in the classroom setting, that answer questions that arise in the classroom, and that permit the easy entry and retrieval of data by the classroom teacher. While the current OSR meets some of these demands, it is obvious that amendments to its present form will be necessary. Furthermore, the present OSR system, while adequate for certain school-based activities such as guidance counselling or decision-making in referrals, is inadequate for many other school and school system demands. Its inadequacies are not surprising as the present OSR was designed in a context which did not anticipate either legislative advances such as "Bill 82" or technological advances such as electronic data processing. Today, however, the system must accommodate such advances. Thus, a consolidation of existing and new legislation has been proposed, a redefinition based on the present OSR is obviously necessary.

The system designed in this study must be able to accommodate a range of users, including students and their parents, classroom teachers, guidance counsellors, specialists from a number of helping professions, and administrators such as superintendents, planners, and curriculum designers. Furthermore, while the classroom is the focus of the system, many users are located outside the school, in central administrative offices. Such a variety of users and locations calls for the existence of a number of discrete elements, joined together in a system having the characteristics of adaptability, flexibility, and expandibility. The system must incorporate elements based on the present OSR and include new elements deriving from the requirements of "Bill 82," some of which have been outlined earlier in this chapter. The elements required, and the reasons for their inclusion, will be described in the following pages.

The student information system must accommodate classroom, school, and school system decision-making which will be characteristic of the future. Although geared primarily to the decisions made by the student's teacher, the system must also meet the needs of school and school system decision-making. The SIS must span the various levels from individual student to school system, and be functional for all those who make decisions based on student data. Thus, the system's design must link its elements to permit the use of data by personnel at different levels, in different locations, and in different formats. As a consequence, it may be necessary to employ different media, i.e., electronic files, paper or fiche, to accommodate user needs and to link record elements innovatively. Table 2 shows the elements of the system, with the types of data they contain, the location and medium of file storage, and the points of access. The ways in which elements of the system have been linked to provide data have been spelled out in chapter 3.

Any system that contains personal data must be protected against abuses which might arise in the course of employing the data it contains. Thus essential to the system must be the control mechanisms of legislation, policy, and procedural guidelines (still to be developed), and the mechanical and electronic locks and bars which prevent unauthorized access to data. These control mechanisms must form an integral part of the system and must be considered as critical to its success. Control mechanisms will be considered throughout the report and will be presented in recommendations where appropriate.

The student information system, then, is composed of elements that contain data on students. These elements, employing a variety of media, are linked by communication channels through which data are moved to users at various levels of the organization. As data are provided, they are processed so as to provide information in an appropriate form for decisions. Access to the data by authorized users is controlled through a system of physical, political, and legal constraints that ensure the effective and ethical use of the information in the system. It is the intention of this project to present such a system, dedicated to the provision of appropriate educational services to its clients, the students.

III. THE PURPOSE IN RELATION TO RECENT LEGISLATION

The following discussion examines the purpose of the student information record, firstly as it is presently defined in Section 237 of the Act, and secondly in relation to the implications of recent amendments.

Table 2

LOCATION, MEDIUM, AND ACCESS POINT OF DATA RETAINED IN THE STUDENT INFORMATION SYSTEM

Element Name	Types of Data Held	Medium in Which Data are Held	Location of Data	
			File Storage	Point of Access
Office Index Card (OSOR)	Identification, location, tracking	Paper file (microfiche)*	School office	School secretary
	Identification, location, tracking	Electronic file	School computer	Mini-computer terminal in school
OSR Folder	Identification, schools attended, academic attainment, credit record	Paper file (microfiche)*	School or guidance office	School or guidance office (secretary)
	Identification, schools attended, academic attainment, credit record	Electronic file	School computer	School or guidance office mini-computer terminal
OSR Folder Inclusions	Individual education plans, registration forms, transcripts, achievement forms, any other data	Paper file	School or guidance office	School or guidance office (secretary)
	Test results, tracking, transcripts	Electronic file	School computer	Mini-computer terminal
School Health Card	Medical alert condition, first-aid required, physician	Paper card	In OSR-school	School secretary
Attendance Record	Register, reasons for absence	Electronic file	School computer	Mini-computer terminal
	Situational data, home, family	Paper file	CBO: Attendance	Attendance officer
Documentation File	Legally significant documents, consents, court orders, procedural records, reports	Paper file	School office	Principal then superintendent
Professionals' Notes	Notes of professional, private reminders, confidential data	Paper file	Professional's office	Professional

*These files may be photo-reduced to microfiche one year after pupil retirement or graduation.

A. Current Definitions of Pupil Records

At present, Section 237 of the Act defines a pupil record as "a record maintained or retained by the principal of a school in accordance with the regulations" (Act, s.237 (1)). The record contents consist of two parts: (i) those specified in the regulations that must be retained, and (ii) those selected by the principal of the school for inclusion and retention in the student's record. The criterion for selecting data under the latter authority appears to be "that in the opinion of the principal," information should be included "for the purpose of the improvement of instruction of the pupil" (Ontario Regulation 271, s.5(1)c). The decision on these unspecified inclusions rests with the principal. The record is further defined as "privileged for the information and use of supervisory officers and the principal and teachers of the school" (Act, s.237(2)). In general, Section 237 treats the OSR as the only record, other than the attendance register, maintained by the school system. Ontario Regulation 271 specifies in more detail the required and the permitted inclusions and uses of the record. Various memoranda (e.g., OME Memorandum No. 59, 1982) and other interpretive guidelines serve to clarify the Act and regulations.

At present, the OSR is legally defined as a collected body of information clearly restricted in its purpose and use, and controlled by the principal of the school. Are the distinctions and restrictions presently incorporated in the Act, regulations and various memoranda necessary and sufficient to accommodate the requirements arising from "Bill 82"? Do the recent amendments to the Act have any significance for the governance of the OSR?

B. Implications of Amendments to the Education Act (1974)

In 1980, Ontario amended the Education Act through the incorporation of "Bill 82," which formulated several major changes in the delivery of educational services. Firstly, for all students, boards were required to "implement procedures for early and ongoing identification of the learning abilities and needs of pupils, and [to] prescribe standards in accordance with which such procedures [can] be implemented" (Act, s.8(2)a). Mandatory universal identification implies not only that appropriate procedures need to be developed and applied, but also that the school system record in some manner these procedures, the standards on which identification is based, and the inclusion of each pupil in such a program. Thus, we must ask whether mandatory ongoing identification of learning abilities and needs requires a redefinition of the "purpose of the record."

The second major area of educational change introduced by "Bill 82" is the required provision of "appropriate special education programs and special education services" (Act, s.8(2)). The special education program is defined as one "that is based on and modified by the results of continuous assessment and evaluation and that includes a plan containing specific objectives and an outline of educational services that meets the needs of the exceptional pupil" (Act, s.1(1) para. 63). Special education services are construed to mean "facilities and resources, including support personnel and equipment, necessary for developing and implementing a special education program" (Act, s.1(1) para. 64).

In effect, "Bill 82" requires the provision of appropriate programs and services to all children identified as exceptional, in addition to requiring ongoing identification for all children. The Act in some instances also specifies a requirement to document the related processes, but in other instances the requirements are only implied.

Another major area of educational change arising from the recent amendment relates to appeals. The Act specifies the establishment of "committees to identify exceptional pupils and to make and review placements" (Act, s.10(1), para. 5(iii)). It also provides to parents the right "to appeal the appropriateness of the special education placement" (Act, s.8(2)), "in respect of identification and placement of exceptional pupils in special education programs" (Act, s.10(1), para. 6). Section 34 specifies procedures for such appeals regarding the "hard to serve" pupil, while Section 10 empowers the Minister to develop regulations "governing procedures with respect to parents and guardians for appeals in respect of identification and placement of exceptional pupils" (Act, s.10(1) para. 6).

Several of the appeal-related regulations have now been enacted, and mechanisms to appeal IPRC decisions on exceptional pupils are in place. The Act also creates the Special Education Tribunal (SET) which functions under the Judicial Review Procedure Act (Act, s.34(15)). The SET is available after all other appeal routes have been exhausted, and is applicable to decisions related to "hard to serve" pupils (Section 34) and for other decisions, pertaining to exceptional (non-"hard to serve") pupils, although the Act permits the option of using ad hoc regional tribunals (Act, s.36(1)). Decisions made by the SET and the regional tribunal are "final and binding" on all parties (Act, s.36(5)).

To what extent does "Bill 82" require redefinition of the purpose of student information and hence the record? Student information (and hence the record) is clearly accorded a pivotal role in the process of identification and placement, and will also function as an essential legal resource in facilitating the decision-making and appeal processes required by the early identification and special educational amendments and regulations.

As we have seen, "Bill 82" mandates three major school system initiatives: (i) the ongoing identification of all children's learning abilities and needs; (ii) the provision of special education programs and services; and (iii) the establishment of decision-making bodies to execute identification, placement, review and appeal procedures. Consequently, the definition of the "purpose of the record" must ensure that information necessary to honour the new obligations can be accommodated.

C. Additional Implications

In addition to the Education Act and its amendments, three other acts or legal principles are relevant particularly within the field of administrative law. First, the Statutory Powers Procedure Act is a procedural statute governing tribunals or hearings with the statutory power of decision-making where the rights of the individual may be affected. It speaks to a number of issues concerned with "natural justice." Legal opinion differs about whether this law will apply to all levels of parental appeal created by "Bill 82." Where it does not apply, however, the "doctrine of procedural fairness" may be invoked (Cosman, 1982). This doctrine is also founded on the legal principle of natural justice. It outlines obligations and rights with respect to the administration of justice. A third germane principle to be considered is embodied in the previously mentioned Judicial Review Procedure Act, which permits and regulates court review of the integrity and fairness of previous legal and quasi-legal proceedings.

Procedures established by these statutes and principles of administrative law specify the following: (i) that reasonable notice be given to all parties directly involved in any hearing, thus permitting their attendance as well as sufficient time for preparation; (ii) that rules for representation be followed, so that each party be entitled to the services of a lawyer or other agent; (iii) that each party be provided with the opportunity to participate in and respond to the proceedings; (iv) that in some contexts each party has the right to call and cross-examine witnesses; (v) that documentation, records, reports and notes a court or hearing will rely upon for its decision be available to all parties; and (vi) that each party be entitled to receive a written decision which must include the reasons for that decision.

If we are to anticipate that the major areas of change arising from amendments to the Act may be tested, and that statutes and principles of administrative law may be relied upon, then the implications for the OSR are clear: it will increasingly function as an information resource crucial to educational, administrative, and judicial decision-making.

Consequently, the purpose of the student record must be redefined in the legislation to accommodate the documentation of administrative procedures and program decisions. In exploring these implications further, the balance of this chapter will address four major questions:

1. Should the sole purpose of the OSR be to contribute to the improvement of the instruction of the pupil?

2. Should the OSR be the only student record retained by a school system and its personnel?

3. Does the present three-part OSR format restrict necessary inclusions?

4. Should the principal be the sole judge of whether information is to be retained in the record?

IV. THE PURPOSE: IMPROVING INSTRUCTION

Should the sole purpose of the OSR be to contribute to the improvement of the instruction of the pupil?

The fundamental purpose of the student record is, appropriately, the improvement of the instruction of the pupil. There is no justification for a school system to amass student information if that information is not specifically intended to improve the ability of the system to meet the students' educational needs. Furthermore, the relation between the purpose of information retention and the data actually retained in the system should be direct. To ensure that practitioners are constantly aware of the need for such a relationship, explicit and unambiguous statements of purpose, and of the constraints and duties thereby placed on practitioners, should be made available.

While no direct definition of purpose is currently given, the Act states that the student "record is privileged for the information and use of supervisory officers and the principal and teachers of the school for the improvement of instruction of the pupil" (Act, s.237(2)). Another reference to purpose is made in Regulation 271 under the Act, where the transitional process for establishing the new records, originally drafted in 1973, is defined. The transfer of the contents of the previous student records permitted the insertion of "documents, photographs, or other information in writing that in the opinion of the principal should form part of the pupil record for the purpose of the improvement of instruction of the pupil" (O.R. 271, s.5(1)c). While the Act and regulations indicate a number of uses to which the record might be applied, these are not specifically defined. It is desirable to underline the relationship between intent practice, through an explicit statement of the primary purpose of a SIS. It is therefore recommended that the Act be amended to include relevant statements.

Recommendation 8: that the purpose of the student record and its management system be defined in the Act.

Recommendation 9: that the sole purpose of the student information system be defined as the improvement of the quality of the instruction of the pupil.

If the sole purpose of the record is defined as stated above, there is only one justifiable criterion for the retention of data in the SIS: that the data must contribute to improved instruction. Information that is unable to meet that simple test should be excluded from the student record. An assertion should be made in support of such an exclusion. The following recommendation is therefore made:

Recommendation 10: that student information failing to contribute to the improvement of instruction of the pupil be excluded and expunged from the record.

While use of the record is directly related to the defined purpose of the record, further uses to which it may be put are further constrained by various professional codes of ethics governing or guiding some users, as well as by the legal protections available to the informed parent or student (Act, s.237(2) to (5), (9) and (10)). The relationship between the elements collected and stored in the record and the purpose of the record should be clearly stated. Dependence upon codes of ethics or vigilant and reactive parent/student guardianship alone is not a sufficient safeguard.

While present statements on either the purpose or the exclusion of data would appear to be clear, their application could create considerable difficulty if they are not further qualified. Firstly, within the SIS conceived by this study and described more fully in Reports No. 2 and 5, data that cannot be identified with an individual student and data which do not bear on a student's educational program, are excluded by definition from pupil records. While the education system may "host" non-educational services such as psychiatric assessment and referral or certain personal counselling services, they do not necessarily affect educational programming. As a result, records maintained for these services that are not education-related are not conceived of as part of the SIS. However, should the pupil information retained in non-SIS records (e.g., psychiatric records and counselling files) become directly relevant to educational decision-making and programming, then the data would become an intrinsic part of the SIS.

A second qualification regarding the purpose of the record is that the specification of data which "contributes" or "fails to contribute to improved pupil instruction" depends upon one's definition or conception of "contribution"; it need not exclude the delineation of pupils' educational strengths and weaknesses with the consequent choice of program strategies and their effects. In light of "Bill 82," schools will be required to recognize new documentation obligations, but must also continue to meet the informational requirements previously established, and the uses of the records already mandated (Humphreys, 1980). In essence, the records that schools retain must serve a number of uses and must assist the schools to meet the obligations established in the Act, its regulations and the related memoranda. Interpretation of the concept of contribution must therefore be sufficiently broad to include the range of data that will be required to meet these obligations. Furthermore, such obligations must apply to both paper-based and electronic data systems.

In sum, the above recommendations suggest that the Act and its regulations explicitly state the sole and exclusive purpose of the student record, and define such purpose broadly. This purpose can be accommodated only within a systemic context, appropriate to the inclusion of all types of data and media. Such a system should be clearly defined, and the recommendations set out in this report assist in such definition.

Recommendation 11: that the SIS be entitled "The Student Information System of the ______ Board of Education/Roman Catholic Separate School Board" (SIS).

Recommendation 12: that the SIS contain the following elements:
i. the office index card (OSOR)
ii. the OSR folder

iii. the OSR inclusions
iv. the school health card
v. the attendance file
vi. the documentation file
vii. professionals' notes

Recommendation 13: that the SIS be defined as incorporating all identifiable data and information relating directly to a student's instruction, collected and/or maintained by a school board or by a person acting for or in concert with a school or board.

V. MULTIPLE RECORDS

Should the OSR be the only student record retained by a school system and its personnel?

With the exception of attendance records, the OSR (inclusive of the office record card) is at present the only legally defined student record containing student information identifying individuals that may be retained by a school system. The regulation that requires the destruction of other records was probably established as a transitional measure to allow the implementation of the new OSR format in 1973. More than a decade after the new system has been implemented, this guiding regulation no doubt needs revision. It states:

> Where the principal has established a record in respect of a pupil, the record of progress through school of the pupil and any written information and documents that pertain to the pupil, that have not been inserted in the record folder and that are not records of attendance of pupils recorded in the register . . . shall be destroyed (O.R. 271 s.5(2)).

It seems clear that this section of the regulation intended that no pre-existing student information should remain outside the official pupil record once the latter had been established.

Recommendation 14: that the SIS be regarded as a single student information management system encompassing all education-related student information within one control structure.

Recommendation 15: that all SIS information stored outside the OSR folder be listed in an index, the index to be stored in the documentation file and to record the date of inclusion and location of all such information.

Recommendation 16: that all considerations regarding pupil records and the SIS apply to all information regardless of the medium utilized for its collection, storage or dissemination.

A. The Attendance File

The attendance register is the only record of student information that is currently required but that is not part of the OSR (Act, s.236(c)). It is difficult to justify such an exclusion both in terms of the efficiency of data handling and the fact that the data are recorded in the school and are, in form and use, similar to other student data retained in the OSR (Act, s.27(1)). The fact that the attendance register was already covered by legislation at the time of the 1973 OSR amendments was, in all likelihood, the reason for its exclusion.

Under the Act (s.237 (2)), data at present in the OSR are not directly accessible to the attendance counsellor, except with the consent of the parent or student. Such consent may not be available when a parent or pupil is subject to investigation for alleged violations of the law relating to attendance. While the principal must furnish information required by the attendance counsellor (under s.27(1) or by relying on s.237(6)), there is a degree of uncertainty about the extent of information to be disclosed. Similar information may be required by child welfare agencies, as well as by provisions of the Young Offenders Act, where attendance counsellors or other school board staff may be required to provide information for reports relevant to the new youth courts.

There appear to be no theoretical or practical reasons for excluding attendance data from the student information system, and it is recommended that this particular anomaly, likely existing only for historical reasons, be amended. It is also recommended that the statute be clarified to provide policy guidance to principals as to the extent of disclosure of student information where a professional such as an attendance worker is required directly or indirectly to have access to certain pupil information.

Recommendation 17: that the attendance file be considered an element of the SIS and that the degree to which information in the SIS should be available to attendance counsellors be explicitly stated.

B. Professionals' Notes

While the record of attendance is specifically excluded from the rule, other records, even apparently those of specialized personnel such as attendance counsellors, psychologists, social workers, or consultants (who may not be teachers in the school) may not be retained outside the record folder. Furthermore, it would seem that the teacher, the principal and the supervisory officer would be restrained to keep all of their notes as part of the official record. The legislation thus specifies that all information that can be identified with an individual student should be retained in and only in, the OSR, as defined in the Act and its regulations, that is, in or on the office index card, the record folder, or the attendance register.

Recommendation 17 would solve only one of the many problems which arise from the proliferation of student data files. Current research has clearly established that numerous practitioners working with school children develop extensive files containing sensitive information. Such practitioners belong to one of at least five subgroups:

1. Medical, psychiatric and nursing professionals who are governed by the Health Disciplines Act and its regulations, and sometimes by additional statutes, and whose practices on the disclosure of information provided to them by or about patients are thereby constrained;

2. Psychologists who are governed by the Psychologists Registration Act, and who are also subject to limitations on the disclosure of information provided to them;

3. Supervisory officials, principals, teachers and attendance counsellors who are governed by the Act;

4. Specialists such as social workers, psychometricians, consultants, and others, some of whom may not be governed by specific legislation, but who, by virtue of their membership in professional associations, adhere (or would be expected to demonstrate adherence in a court of law) to codes of ethics that include limitations on the disclosure of confidential information;

5. Other persons including data-handling, planning, research, clerical, and other support personnel, who by virtue of their positions in the school or school system work with and possibly store information on individual students or families.

The nursing profession, for example, is regulated by statute, and under the Health Disciplines Act, professional misconduct of nurses is defined to include "failure to exercise discretion in respect of disclosure of confidential information about a patient" (O.R. 449, para. 21(k)). A more complete discussion of "discretion," and of the public health nurse's accountability to the supervisory medical officer of health may be found in Krever (1980, Vol. III, chapter 29). Here it is sufficient to note that the statute would appear to prohibit information (such as notice of a health alert) being added to a student's record by a nurse, without parental permission. In addition, the Act also requires parental consultation before the insertion of such information in the OSR folder by a principal (O.R. 271, 14(2)). The Act does, however, permit the addition of important information to the record by the principal, and the authors propose (see p. 147) that possible contradictions between prohibition and permission be resolved through the inclusion of school-related and critically important health data in the pupil record.

In addition to the professional files of non-teachers, our recently completed field research indicates that many teachers, especially those of younger children, maintain private notes, records, and files about their students, and frequently retain such records several years after the child has moved along. Several reasons are proffered for this practice. Subsequent teachers, for example, may turn to a child's former teachers for information, especially when problematic situations arise. In some situations, depending upon teacher and/or system preferences, these files or the information they contain are not kept by former teachers but are passed directly to the next teacher at promotion meetings, and on occasion follow the child beyond primary school, even into the secondary school.

One such proffered reason is that there appears to be widespread concern on the part of teachers that parental and student access to the OSR prevents professional candour. In most cases, such concern is unfounded and even ironic, since most students or parents are unaware of their access rights. Where reporting of students' strengths, weaknesses, programs and progress is based upon sound professional practice, such reporting would not be construed as wrongful; on the contrary, lack of data and of clear reporting may increasingly come to be interpreted as an abrogation of the school's or teacher's duty to the child.

While the authors would reject as justification for the retention of secret personal files problems that might arise from student or parental access, there is a need for records to be easily accessible to practitioners. There may even be justification for the retention of private files where the professional judges decide that it is in the best interest of the client to decline to disclose certain information. As a consequence, it may be necessary to establish records that are not retained in the present OSR folder, but that are subject to a set of controls which protect student privacy and the confidentiality of data.

It should be noted here that storage of pupil records in a single location, as implied by the Act, is impractical for several reasons. First, immediately accessible working documents are often needed by professionals in their work with individual students and families. It would be impossible for such documents to be retained in a single location. Secondly, it would be equally difficult to keep all the records generated by various professionals in a single undifferentiated record as exists at present. Variability in record content needs is considerable, and thus problematic, and legal or ethical restrictions frequently prohibit data gathered by one category of professionals being available to others. Furthermore, this protection has led to other dilemmas.

While practitioners such as teachers, supervisory officers, and principals are often concerned that other professionals, such as psychologists, psychiatrists, physicians, or nurses, withhold information unduly, it must be emphasized that in certain contexts the sharing of confidential information without consent is defined by statute as professional misconduct. Breaches of the relevant laws and statutory codes of ethics, as mentioned above in the case of nursing misconduct, carry serious legal consequences. This is not to suggest, however, that mechanisms permitting the legitimate exchange of education-related pupil information should not be explored, particularly in light of the increasing demands brought to bear on the educational system by the passage of "Bill 82."

All information of direct relevance to classroom and educational programming would be included within the proposed SIS. Information not related to the student's education would be excluded until or unless such data became relevant to educational decisions. In the proposed system, parent/student consent would be required before data previously considered educationally irrelevant could "cross the line" between the SIS and non-SIS categories, especially where statutory provisions and codes of ethics prohibit information exchange without consent.

We have stated that, within clearly defined limits, all information need not be accessible to the parent and student, because in the day-to-day world of the school, there are many supports and services provided that do not properly fall within the category of education. This is not the place to debate the efficacy or appropriateness of boards providing such ancillary services to students. Our research interviews with principals and guidance counsellors were not infrequently interrupted by medical emergencies, by calls from parents involved in acrimonious and threatening custody suits, by urgent requests for yet another aggregate report to the board on the most recent enrollment figures, by an attendance counsellor's immediate need to locate a family, by a visit from a parent requesting an interview to discuss a spouse's terminal illness and its impact on the child, by an attempted student suicide, another's unwelcome pregnancy, or the death of a pupil in a car accident. At times disclosure of such data is inappropriate.

This information is recorded and filed by the professional who may also be occupied arranging teacher, support staff, and student timetables, organizing student awards ceremonies, ensuring adequate credit entitlements for each pre-graduating pupil, preparing and conducting classroom lessons, supervising an informal theatre enrichment program, convening volunteer tutoring to compensate for unsatisfactory classroom teacher-pupil ratios, coaching extra-curricular sports events, and taking the time to talk with researchers.

How much of this information--the disasters and ongoing regular activities--should be recorded, filed, made secure, made accessible, and come under the jurisdiction of supervisory officers? Does information on the parent's terminal illness, the suicide attempt, or the lonely student's need for supportive counselling require regulation and full access by parents, pupils, teachers, principals, and supervisory officials?

With reference to access, we have suggested a simple dividing line. Information used by teachers, educational administrators, and other professional consultative personnel to make education-related decisions about appropriate placement and choice of program, must always be included in the official record and thus be accessible to parent and student. Access to information falling outside this category must be regulated by the professionals who are in a relationship of trust with the pupil or parent. A flexible and indexed Student Information System (SIS) makes this proposed division possible.

The right of the professional to maintain or retain sensitive and non-educational data separately from the OSR file rests heavily upon several premises: firstly, that the professional involved is covered by legislation or codes of ethics regulating the confidentiality of such materials; secondly, that the information is not relayed to third parties except where the transmission is required by law or where the subject's valid and fully informed consent is first obtained; and thirdly, that information must not casually "cross the line" to directly or indirectly influence educational decision-making. Valid consent, predicated upon full access, must precede any such crossing of the line.

Recommendation 18: that working notes, files, or records of professionals who are governed by mandate of legislation or by codes of ethics to protect confidentiality and privacy, which contain information that can be identified with a specific student, and which have bearing on or are used to determine the educational program of the student, be considered a discrete element within the SIS, and be for the sole use of the professional in consultations with the student/parent.

Recommendation 19: that professionals retaining notes as defined in Recommendation 18 be responsible for ensuring the high quality of information thus retained, for safeguarding the security of such information, and for determining whether information will be shared with the parent/student, within the framework of relevant legislation.

Recommendation 20: that personnel not governed by mandate of legislation or by codes of ethics to protect confidentiality and privacy be prohibited from retaining working notes, files, or records outside the OSR folder.

The authors do not suggest that the above definition of SIS data is sufficient to cover all problematic situations. Questions concerning the supervisory responsibilities for various records stored within a school, area office, or board, and the relationship between the board as employer and professionals with conflicting levels of accountability have been acknowledged by Krever (1980) and others. As stated by Kelly (1983) in the appendix to Report No. 2 (p. 20), "legislative intervention by statute or regulation would appear to be the only way to solve the problems created for such persons."

The balance between providing and protecting information is often difficult to establish. On the one hand, the present unprotected system with its multiplicity of non-indexed and partially duplicated files, has not obviated the difficulties of information exchange between professionals. On the other hand, ignoring measures for the protection of privacy and the statutory misconduct penalties already referred to is not a viable solution, while removing statutory "impediments" to information exchange would create additional and serious problems. These issues and their resolution have been more fully discussed in Report No. 2 (pp. 55-60) than is possible in this final report. It is clear, however, that amendments to the Act which permit the effective exchange of information necessary for the provision of professional service while safeguarding the interests of students and parents, are essential.

The scope of this report also prohibits full elaboration of the variables relating to inter-sector cooperation. We must, however, consider the implications arising from "Bill 82," which demand that in identifying and meeting the needs of exceptional students, many professionals may be involved in inter-disciplinary collaboration. In fact, many boards already implementing aspects of "Bill 82" regularly utilize resources from child welfare agencies, the medical and public health sectors, social workers, psychologists, psychometrists, speech therapists, occupational therapists, physiotherapists, special education consultants, classroom teachers, administrators, residential counsellors and child care workers from other agencies, various secretarial and support staff, and so forth.

The convening of committees, boards and tribunals to assess, meet, and monitor the exceptional needs of children clearly requires the exchange of information. The proliferation of files maintained regarding any child who may be considered exceptional is already a serious problem, as is the attendant privacy question.

Recommendation 21: that professionals who are governed by mandate of legislation or by codes of ethics to protect confidentiality and privacy, and who are currently working directly with a pupil in compliance with the Act, may be accorded access to relevant pupil information in the SIS by the principal, following initial consent granted by the parent/pupil.

Recommendation 22: that personnel not governed by mandate of legislation or by codes of ethics to protect confidentiality and privacy be prohibited from having access to any pupil information in the SIS in the absence of the direct consent of the pupil/parent; access will be granted only after an affirmation or oath of secrecy has been taken and only under the direct supervision of the school principal, board senior official, or their designates.

To overcome many of these problems, Report No. 2 (pp. 64-66) suggested: the limitation or at least tracking of the production and distribution of agendas; the elimination of composite minutes of meetings involving information about more than one child; the development of monitoring procedures to control the copying and retention of documents from meetings; the elimination of unnecessary identifying information from conference logs required for planning or administrative purposes; the prevention of the provision of sensitive data and minutes containing data identifying individuals to external professionals' monitoring groups without obtaining the prior permission of students/parents; and the tracking of all documents from meetings related to specific children; and/or the development of the electronic retention and display of information required for decision-making to eliminate the need for copying data. Some of these solutions may be practicable in the near future, but it is also important to note that they would not necessarily meet the needs of all boards or all situations.

On the other hand, fairly simple control mechanisms are currently available to all boards, and are adaptable to both paper-based and electronic data systems. These include: the incorporation of legally important materials as one discrete element of the SIS, an OSR-stored index to the location of all elements; a log also kept in the OSR, indicating to whom, when and what information has been released from the SIS; and the recording, on a separate document, of identification, placement and review data and minutes for each pupil, rather than the preparation of composite minutes which record discussions involving many students.

Recommendation 23: that the principal ensure that a log be maintained in each element of the SIS indicating what, when, and to whom school-based information has been released from the SIS to third parties.

Recommendation 24: that agendas for and minutes of administrative procedures required or permitted under the Act be maintained only on an individual basis and be retained only within the SIS.

In summary, the current proliferation of multiple files both within the educational system and outside of it arises from misinterpretations of OSR requirements, from inter-sector and inter-professional practice, and from the requirements of "Bill 82." A new central control mechanism is called for, and this report proposes the adoption of a Student Information System (SIS) and the establishment of an index that will control and limit the current proliferation of information.

VI. THE FORMAT AND CONTENTS OF THE RECORD

Does the present three-part OSR format, namely, the office index card, the record folder, and inclusions in that folder, restrict necessary inclusions in the record?

While we have proposed and discussed the elements that constitute the SIS, it is useful to now review the current format of the OSR, which at present consists of three elements serving essentially different purposes. The first element, the office index card, serves effectively as a ready reference for identification data that are required from time to time in the school office. Generally made of heavy paper, the card is retained after graduation and serves as the permanent tracking device for the student. The second element, the OSR folder, provides the official record of the student's academic career and serves as the permanent official transcript of academic attainment. The third element, the contents of the OSR, has, until now, incorporated all the the documents concerning the student that were retained. Over a period of time, and particularly for pupils who have had numerous assessments, the folder may bulge with papers of various degrees of importance, relevance, and currency. The three-part format has been adequate in the past, since the need for records has been limited and the number of users has been small.

A. New Format

Recent legislation and memoranda demand substantially greater use of the record by a greater variety of personnel, both within and outside the school. The quantity and the types of data to be retained have already increased. Previous discussion have outlined many of the record-keeping implications arising specifically from "Bill 82." In addition, several recent memoranda have particular relevance to the contents of the OSR and to the question of the suitability of the present format.

OME Memorandum No. 14, 1978-79, directed to the education of learning-disabled students, describes the range of information that might be stored in the student's record. It calls for general screening techniques, including early identification programs and screening tests, and, with consent, individual assessments. In addition, specific diagnostic procedures may be called for, such as detailed assessments of the student's health status, intellectual and language functioning, academic attainment, the development and integration of auditory, visual, kinesthetic and motor functioning, and behaviours as observed in a variety of settings. The memorandum specifies that these findings "be translated into instructional expectations and strategies to meet the needs of each student," and that "programs must be reviewed regularly" (Memorandum No. 14, 1978-79).

The above requirements indicate that instructional expectations and strategies need to be explicitly stated and recorded. For at least some children, this could involve no fewer than ten documents and records, and possibly more, depending on how various aspects of assessment are executed and reviewed.

While memorandum 14 refers to those children "suspected of having learning disabilities," Memorandum No. 15, "Identification of Children's Learning Needs," 1978-79, applies to all Ontario pupils. The early identification procedure begins when a child first enters school, and includes the collection of the following information: a health and social history, data on the child's background and development, assessments by professionals outside the classroom "where required," and an educational assessment. Furthermore, such data collection is considered "one of a series of assessments of the child's progress to ensure that the program is appropriate."

With reference to a more general implication of memorandum 15, the collection of student information warrants particular attention in other situations. Because the development of children is highly individual and irregular, it is important to ensure that data utilized by teachers for decision-making are both current and relevant. To ensure currency, all information in the record should be dated, a practice neither required at present, nor rigorously adhered to. Systematic and periodic review and purging processes should be required to remove inappropriate or irrelevant data from the record, and hence from the decision-making process.

Reviews to update and purge the SIS will, on the other hand, require careful consideration, since some data may have potential relevance in providing descriptive developmental profiles of the child where there is subsequent school or parental concern about progress, or where documentation of the rationale for the choice of programs is required.

Recommendation 25. that all inclusions in the SIS be dated to ensure currency.

Recommendation 26: that systematic annual reviews of the contents of the SIS be conducted by or under the supervision of the principal, to remove outdated, inappropriate, irrelevant, or harmful data.

B. The Health Card

Because the condition of a child's health may be relevant to his or her ability to learn, Memorandum No. 15 (1978-79) calls for co-operation between the personnel of local school systems and public health units. While considerable co-operation usually exists between health and education professionals, at times it is not possible to retrieve the health information required to inform teachers of procedures in emergency situations. Such circumstances, though rare, may be critical, (e.g., allergies, diabetic emergencies, and so forth), situations that require emergency attention regardless of the availability of the "school" nurse. Such information is also necessary when program planning occurs, although it is often possible to include the school's public health nurse in such discussions. A mechanism is required which can provide the school, in emergencies and in the absence of the school nurse, with the health information that is directly relevant to educational services.

The development of a single source of information in the school setting that would contain health information necessary for emergency purposes and for educational decisions would seem to be a sensible solution to the problem, although this should not be confused with the public health nurse's medical record. Data directly relevant to education should be collected at the school by the principal or principal's designate, should be updated every year by sending an unambiguous request for relevant health information to the home, with a statement of the implications of not returning a completed form. The information should be retained on a health card, within the OSR file, and be destroyed when no longer current or relevant to school activities. The latter mechanism would protect the privacy of the student, and the annual updating would ensure currency and accuracy. In this way, information would be available indicating whether a child is at risk in certain school programs or situations, and the data would be accessible only to the child's teachers, principal, and those granted access through the principal. Supervising staff (e.g., on yard duty) who must handle medical emergencies could be granted access, for example, while access should be denied to personnel with no direct or demonstrated need.

All legal rights (including those of students and parents) and responsibilities would pertain to the health card, as they would to all other elements of the SIS. The recommendation of a school health card must not be confused with the question of who will deliver health, medical, or para-medical services to children. Those concerns lie beyond the scope of this report. Nor should the recommendations be construed to permit the inclusion of health data that are of no relevance to educational needs. With these constraints in mind, the following recommendations are hereby proposed:

Recommendation 27: that a school health card be established by the principal, based on information obtained annually from the parent, and be included as an element of the SIS.

Recommendation 28: that the school health card contain only information sufficient to inform school personnel of any health condition which may require emergency attention, or place a pupil at risk in specific educational programs or activities, or significantly affect pupil instruction; it should include necessary first-aid procedures as well as the name of a physician to call in an emergency.

The Act and its regulations should assist in clarifying the purpose, definition, and uses of pupil records, and should formally specify the rights and obligations of teachers, principals, and others in utilizing the SIS in a manner consistent with identification and assessment requirements. For example, as noted by Kelly (1983, Appendix, p. 14), while memorandum No. 15 requires that the form containing the "health and/or social history . . . be part of the student's OSR file," unfortunately no statutory or regulatory provision to this effect exists.

C. The Documentation File

The present format of the OSR is sufficiently flexible to permit the inclusion of a wide variety of materials in order to meet many of the needs of the educational system. However, urgent consideration must be given to the modification of the record format in order to permit the separation of legal and quasi-legal documents from the many other materials more directly pertinent to pupil instruction, which the anticipated greater use of records will entail.

While at present no specific legislative provision arising from the implementation of "Bill 82" exists regarding the storage, retrieval, access or destruction of records exists, Kelly (1983) indicates that the recently amended Act has generated extensive legal implications.

The Special Education Identification, Placement and Review Committee (IPRC) will determine whether a pupil is defined as exceptional, and where such a decision is made, will recommend an appropriate placement. Depending on the course of events, as many as thirteen required documents may be generated for or arise from the initial referral to the IPRC. Even further documentation may, optionally, be introduced. An additional ten required documents may be generated from an IPRC review of placement, which can take place as frequently as quarterly, but which must occur at least annually.

Parents may appeal the decisions of the IPRC to a second body, the Special Education Appeal Board (SEAB), to determine whether the school or area/board IPRC decisions were appropriate, and thus a further five required documents may be produced, with additional optional documentation also possible.

Once the SEAB forwards its decision to the board within whose jurisdiction the pupil is enrolled, the board must accept or reject the SEAB report and so inform the parent, who may then appeal the decision of the board to a third body, the Special Education Tribunal (SET). It is anticipated that written notices of appeal, of the hearing, and of the decisions and their reasons would be the minimum documentary requirements for such a tribunal.

A fourth body, the Regional Tribunal, for appeal of decisions related to exceptional pupils, may also be convened on an ad hoc basis, although notice to appeal must first be forwarded to the SET. The SET also will hear all "hard to serve" appeals, and will only convene a regional tribunal as required. The full use of the identification and placement process could thus generate a considerable body of documentation.

When one considers the current dramatic increase in the number of files, reports, minutes, notes, and logs already generated by "Bill 82"'s requirements, the need for an information management system becomes increasingly apparent. Since many if not all of these documents will be fundamental to decisions about identification, program, placement, and appeal, then the format, location, and regulation of document retention and use requires consideration.

It is the authors' contention that there is little justification for the retention of legally important documents in any manner that leaves them unprotected and/or subject to misuse, i.e., without the protection afforded to data retained as an element of the SIS. The same arguments that are applied to other documentation also relate to legal or quasi-legal documents. Legal or quasi-legal documentation may require sensitive information which identifies a specific student and therefore needs to be protected in the same manner as other inclusions are protected. Furthermore, the information contributes to parents' and students' understanding of the processes and the bases of decisions that affect their lives. For this reason the protection of their rights of access is important, and may, as well, influence judgments about procedural fairness. Both the considerations of protection and accessibility dictate the inclusion of such data within the SIS.

On the other hand, the irreplaceable nature of legally important documents dictates the need for their separation from information that is in constant use, especially to prevent loss. Such a separation can be achieved by keeping the document file separate from the OSR folder.

Recommendation 29: that a documentation file be established as an element of the SIS and be kept separate from the OSR folder.

Recommendation 30: that the documentation file contain only those documents that have been completed primarily to meet legal and quasi-legal requirements and procedures, including but not limited to consents, child custody and child access provisions, suspension and expulsion orders and appeal determinations, court documents, early school leave determinations, and documents of identification, placement, review and appeal proceedings and decisions.

VII. RESPONSIBILITY FOR THE OSR IN THE SCHOOL

Should the principal be the sole judge of whether information is to be retained in the record?

The school principal is required both "to register the pupils and ensure (their) attendance" (Act, s.236(c)) and "to establish and maintain, and to retain, transfer and dispose of, in the manner prescribed by the regulations, a record in respect of each pupil enrolled in the school" (Act, s.236(d)). The school principal is also responsible for decisions regarding the contents of these pupil records. Section 30 states that "the principal may, where in his opinion such information is not conducive to the improvement of instruction of the pupil, delete from the record any such entry" (O.R. 271, s.30(1)). The parent or student may request the correction of errors in the record or the removal of inappropriate information. However, the principal must decide whether he or she will comply. Should the principal decline to do so, the parents must be informed of their right to appeal the principal's decision to the appropriate supervisory officer. The supervisory officer may order the principal to comply, or may decline to observe the wishes of the applicant, in which case the supervisory officer must submit the record and the request to a person designated by the Minister for a hearing (Act, s.237(5)). Such appeals are infrequent, however, and the principal is in fact the primary decision-maker. Thus, while the principal is obliged to maintain or retain the record "in accordance with the regulations" (Act, s.237(1)), which prescribe a large body of information that must be retained in various parts of the record, those same regulations give to the principal the sole decision on the discretionary information that may be included in or deleted from the student's files.

The transitional portion of O.R. 271, for example, states that a "pupil record shall be established by . . . inserting in the record folder such other documents, photographs or other information in writing that in the opinion of the principal should form part of the pupil record" (O.R. 271, s.5(1)c). Thus the principal may choose which of these additional items are to be included in the record and which are to be excluded, deleted, or corrected.

Such discretionary power was appropriate when the student record was conceived of as an historical educational record. There are, however, new and serious implications for the adequacy of the record if the control and management of its contents are not sufficiently governed. As the senior manager of educational programs in the school, the principal is the person most able to make decisions at the school level that affect the retention of student data. School records, however, as a consequence of the expanding role of the school and particularly in response to the demands of "Bill 82," must serve a number of uses that have not loomed large in the past. By necessity, these now limit the principal's primary decision-making role with respect to student records.

While the authors would judge that the principal may often be the most qualified person to assess the data required to evaluate program matters, he or she is not necessarily the best person to identify data relevant to appeals and other legal and quasi-legal determinations. The fact of the transfer of pupils from school to school, moreover, or from board to board, may subject the record to a process of obliteration as each subsequent principal removes those items which "in the principal's opinion . . . fail to contribute to the improvement of instruction of the pupil." There is a need to establish substantive guidance for the principal of a school as the contents of the record are assembled, maintained, removed, discarded, and retained.

One further problem has come to our attention during this study. The obliteration of the record's contents, as the student and his or her file changes schools, is not the only threat for a complete record. Records may be unavailable to a board once a student leaves a jurisdiction to another board or to enter a private school. This could be problematic if the original board requires information to justify its placement or program in a parent-initiated appeal, and the parent or student refuses permission for the newly-placed record to be made available. Such circumstances may cause proliferation of files if access by boards to records are not automatically made available.

Guidelines for the development of procedures for the maintenance and retrieval of data should thus be established. Firstly, a clear and precise set of guidelines is needed to assist the principal in his or her selection of information that is or will be required to identify the needs of the student, to make decisions related to the student's program, to document the decision-making process, and to determine the status of periodic student review.

Secondly, pre- and in-service professional training, aimed at the development of an understanding of the issues related to information management is required to complement the guidelines. This training could include analysis of the legal processes related to information management, individual educational assessment, and of programming and program evaluation within the context of the SIS.

A third requirement, perhaps superimposed upon such guidelines and in-service training, is the establishment of general supervisory responsibility for the OSR system. This requirement will be dealt with in a subsequent chapter.

In light of the two modifications discussed above, and in response to the increased obligations of the school system to identify, meet, and document children's educational needs, three recommendations are made.

Recommendation 31: that all elements of the SIS normally be retained in the school in which the pupil is placed or registered.

Recommendation 32: that a clear and precise set of guidelines be established to assist the principal in selecting categories of school-based information relevant to the pupil's education, required by legislation, or that are required to document decision-making or administrative procedures.

Recommendation 33: that pre-service and in-service professional training programs and materials be developed to foster an understanding of the issues and appropriate practices related to information management.

VIII. SUMMARY

Within a broad discussion of the purpose of student records, it has here been recommended that the Act and regulations explicitly define the pupil record, specify its purpose, and be made applicable to all methods and media of data systems and record storage. The unregulated proliferation of multiple files is discouraged. The OSR folder is defined as one element of a single information management system within one control structure, the latter referred to as the SIS. Indexing mechanisms and dissemination logs will further facilitate the management functions of the SIS which also includes the following seven elements: (1) the office index card; (2) the OSR folder; (3) the OSR inclusions; (4) the school health card; (5) the attendance file; (6) the documentation file; and (7) professionals' notes.

Professionals governed by statute and codes of ethics should be accorded the right to maintain strictly confidential working files that are not subject to principal, teacher, or supervisory officer access provisions unless parent/student consent is first obtained and the professional believes such access to be advisable. It has also been recommended that discrete committee minutes and records of administrative procedures be maintained in the SIS, and that unregulated transmission of multiple copies of documents be discouraged. The dating and systematic screening of record contents will help to ensure the currency and relevance of student data in the SIS. Legal and quasi-legal documentation must be protected from loss or damage, but access rights to that data must also be protected, both for parents/students and for boards. The provision of guidelines to school administrators to help establish the categories of data that must be retained, as well as the provision of professional development opportunities in the field of student information management, will strengthen the professional's regard for sound educational practice.

CHAPTER FIVE:
LEGAL-ETHICAL CONSIDERATIONS

I. INTRODUCTION

The reader will recall that the model proposed for judging, on a generic basis, the effectiveness of an information management system has three dimensions: the informational, systemic, and legal-ethical dimensions. The generic attributes must be examined with reference to specific contexts. This chapter will focus specifically on the legal-ethical dimension within the context of the Ontario education system, necessitating further consideration of current structures and legal requirements.

The specific objectives of this discussion derive from the need to examine the "how" and "why" of student records, and to compare the answers to those two questions with the actual records themselves. If the present legal structure specifies reasons for the maintenance of a student record system, we must not only identify those reasons but also enquire into whether the data currently collected are, in fact, stored, and stored for appropriate reasons. More simply stated, we must ensure that the amassing of highly personal information developed to improve pupil instruction does in fact attain that goal.

Furthermore, if the educational system and its participants are obliged to amass such data, they are obliged also to protect it and its subjects from inadvertent, casual, or malicious abuses. The obligation to protect is at least as compelling as the responsibility to gather and store. Any judgments of the efficacy of the student information system in Ontario must therefore incorporate intrinsic considerations of the effectiveness of policy and practice in protecting the subjects of the system.

The historical, philosophical, legal, and ethical bases for the rigorous insistence on an undivided partnership between the provision and protection of information are fascinating, complex, and beyond the scope of this chapter. The discussion is presented in detail, however, in Report No. 2 of this project, and readers interested in the historical and philosophical concerns are referred not only to that source, but also to the relevant references in the bibliography.[*] This chapter must necessarily be more limited in scope; it is based upon an analysis of the four components constituting the legal-ethical dimension of our original model. These components--consent, access, security and informing--will be the major focus of our discussion, as they are the primary mechanisms for ensuring that the obligations to protect the subjects of data systems are in fact understood, developed, communicated, practiced, evaluated, and refined.

---

[*] See, for example, Alexander & Dunlop, 1979; Beer, 1972, 1979; Burns, 1980; Gibson, 1980; Humphreys, 1980; Kelly, 1981; Krever, 1980; Magsino, 1982; Martin, 1976; Safer et al., 1978; Smith, 1980; Somerville, 1979; and Yoshida & Gottlieb, 1977, cited in the bibliography at the end of this report.

II. SOURCES

In order to formulate its analyses and proposals, the original research on which this chapter was based relied upon the germane statutory frameworks, extant policy and interpretive guidelines including relevant case law, the legal opinion and extensive commentary prepared by H. M. Kelly (1983), and consideration of the implications not only of the project's field research in Ontario school boards, but also of the project's extensive consultation with over fifty related organizations and their representatives who frequently act in concert with the educational system.

The multifaceted inquiry into "the state of the art" of student records management in Ontario also had to incorporate an examination of the parameters of early identification and special education concerns throughout the school system, since one of the obligations of the research was to establish the demands placed on school boards as a result of "Bill 82." The reader is here reminded, however, of the primary assumptions guiding the formulation and execution of this research project as described in chapter 1. To accommodate those assumptions, we have attempted to produce an integrated analysis and devise a range of flexible recommendations adaptable for all pupils attending any Ontario school program.

The following is a list of those legal and quasi-legal documents studied.

A. Federal Legislation

- Charter of Rights and Freedoms, Schedule B, Part 1, Canada Act, 1982;
- The Young Offenders Act, S.C. (Statutes of Canada) 1982, Chapter 110.

B. Provincial Statutes

- Child Welfare Act, R.S.O. 1980, Chapter 66;
- Education Act, R.S.O. 1980, Chapter 129;
- Family Law Reform Act, R.S.O. 1980, Chapter 152;
- Health Disciplines Act, R.S.O. 1980, Chapter 196;
- Judicial Review Procedure Act, R.S.O. 1980, Chapter 224;
- Mental Health Act, R.S.O. 1980, Chapter 262;
- Ontario Human Rights Code, R.S.O. 1980, Chapter 340;
- Psychologists Registration Act, R.S.O. 1980, Chapter 404;
- Public Health Act, R.S.O. 1980, Chapter 409;

- Public Hospitals Act, R.S.O. 1980, Chapter 410;

- Statutory Powers Procedure Act, R.S.O. 1980, Chapter 484.

C. Ontario Regulations (Education)

- O.R. 262, "Elementary and Secondary Schools and Schools for Trainable Retarded Pupils - General";

- O.R. 271, "Pupil Records";

- O.R. 274, "Special Education Programs And Services";

- O.R. 554/81, "Special Education Identification, Placement, and Review Committees and Appeals."

D. Ontario Ministry of Education (OME) Memoranda

- OME Memorandum No. 14, "Education of Students with Learning Disabilities," December 21, 1978;

- OME Memorandum No. 15, "Early Identification of Children's Learning Needs," December 27, 1978;

- OME Memorandum No. 34, "'Training Credits," April 23, 1979;

- OME Memorandum No. 24, "Early Identification," December 31, 1979;

- OME Memorandum No. 26, "Access to Pupil Records," March 14, 1981;

- OME Memorandum No. 30, "Secondary School Special Education," April 14, 1981;

- OME Memorandum No. 38, "Education of Gifted Pupils," June 18, 1981;

- OME Memorandum No. 8, "Ministry Identification Number," September 10, 1981;

- OME Memorandum No. 14, "OSR Requirements," November 20, 1981;

- OME Memorandum No. 18, "Linkage Program Official Records," December 16, 1981;

- OME Policy/Program Memorandum No. 59, "Psychological Testing and Assessment of Pupils," October 11, 1982.

E. Ontario Ministry of Health ("OMH") and OME Memorandum

- OMH/OME Memorandum, "Ministry of Health Immunization Program," April 14, 1981.

F. Other OME Publications

- Manual for the OSR System, 1978 edition;
- A Planning Guide for School Boards for the Development of Comprehensive Programs and Services in Special Education, 1981;
- Special Education Information Handbook, 1981.

G. Jurisprudence

- General legal principles and considerations, as well as specific case law, with reference to federal and provincial (Ontario) statutes listed above, in addition to the American Education for all Handicapped Children Act.

A detailed description of case law resting upon these statutes, together with interpretive cautions, is found in Report No. 2 (Humphreys & Weintraub, 1983) and in its appendix by H. M. Kelly (1983).

III. CONSENT

A. Definitions

Consent is one of the four attributes of the legal-ethical dimension in our conceptual model of information management. Consent has been defined above as "an act of the will of a person to permit an action, after that person has been provided with sufficient information about the possible implications of the action to be able to assess its consequences" (chapter 2, p. 14). Kelly (1981, p. 1) states that consent "is an act of the will," and differentiates between the act of consenting and the signing of a consent form. He suggests that a signature on a consent form is "worthless if that act of the will has not been made." Somerville (1979, p. 38) also emphasizes consent as a process rather than an event. The act of consenting to the collection and dissemination of personal information is part of the question of the degree of control a person is able to maintain over that information. Krever (1980, p. 134) suggests that guidelines on consent must address not only "types of information which must be shared in the interests of the child, but also . . . the kind of information which a parent or child may validly refuse to share." Humphreys (1980, p. 51) suggests that information "may be collected without invading privacy if the person controls what will be collected, and how, and to what extent, and under what conditions it will be further communicated. Consent procedures permit this control to reside with the person."

Approval to collect or share information may be provided by two means. The first is "direct consent," defined as the consent provided by a subject of a record acting on his or her own behalf. The second, "representational consent," refers to approval provided by a person or persons acting on behalf of the subject of the information. The latter may be provided by a representative appointed by the subject, by a duly constituted representative legislative body acting in its official capacity, or by an official appointed by such a body. Provincial legislatures and boards of trustees, for example, may provide "representational consent."

At times it may be necessary to combine the two types of consent, as for example, when the school board provides representational consent for the collection of data for a complex research project while the student or parent may provide or withhold direct consent to act as subjects in the research.

It may be argued that the very act of collecting information amounts to direct consent by the subject. This would be true only where all information is obtained directly from the subject, and even then the argument has serious deficiencies. Informed and valid consent requires full knowledge of the consequences of giving or withholding that consent. Collectors of information may fail to inform subjects of available options, or of the implications of providing or refusing to provide consent and/or information. Unless the subject is fully informed, in a non-coercive manner, the consent implied by simply providing the data cannot be considered valid, nor can it be construed as an act of the will.

Invasion of privacy may occur at two points: when information is collected, and when it is passed from the control of the collector to the control of a third or subsequent party. For consent to have any meaning, it must act at both these points. It is often necessary to document consent as an act of the will by obtaining the subject's written permission for the collection and transmission of specific data. Effective information management would ensure that documentation of consent is in fact available prior to the collection and dissemination of information.

Recommendation 34: that requirements for informed consent be made explicit, in the form of statutes, regulations, policy statements, and/or operating procedures.

Recommendation 35: that in order to ensure the validity of consent, subjects be fully informed of the implications of providing and withholding that consent, and be afforded the opportunity to discuss the consent request fully.

B. Analysis of Current Requirements

The major strength of current legislation speaking to issues of consent is the clarity with which the requirements for direct consent are specified, with respect to the dissemination of information originating from the OSR. The Act is explicit in its requirement for consent prior to the provision of this information. The OSR is provided for the use of supervisory officers and the teachers and principal of the school and

> . . . is not available to any other person, . . . is not admissible in evidence in any trial . . . without the written permission of the parent or guardian of the pupil or, where the pupil is an adult, the written permission of the pupil. (Act, s.237(2))

The Act further declares that:

> . . . every person shall preserve secrecy in respect of the contents of a record . . . and no such person shall communicate any such knowledge to any other person except, (a) as may be required in the performance of his duties; or (b) with the written consent of the parent or guardian of the pupil where the pupil is a minor; or (c) with the written consent of the pupil where the pupil is an adult. (Act, s.237(10))

The right to privacy that is secured through consent is, in fact, so clearly specified that the use of the record in legal proceedings is severely restricted and even in situations where a subpoena is involved, the consent of the parent/student is required. It should be noted, however, that according to Kelly in The Court and You, educational personnel are compellable witnesses and are not exempt from requirements to attend court or to attend with notes and records if documents are subpoenaed (Metropolitan Separate School Board, 1979). In some jurisdictions, the court may permit the exclusion of OSR materials, particularly in light of the Act's consent requirements. Exclusion is ruled upon on the basis of judicial discretion. It is clear, however, that use of the information in the OSR is for educational purposes, that is, in the performance of duties (Act, s.237(10)), in the preparation of ministry or school board reports (Act, s.236(6)), or in disciplinary proceedings (Act, s.237(13)).

The specific requirement of direct consent, however, contrasts strongly with the ambiguity that surrounds other aspects of consent procedures. Current regulations present a complex and confusing array of information that may be collected: there is little to guide the principal on the procedures that are necessary before information collected. The legislation unfortunately is silent on definitions of valid consent, and fails to offer suitable, explicit, or consolidated policy.

At present a vast quantity of data is collected without explicit statutory reference to consent. It is this category of data that is of great concern. O.R. 271 lists types of data that are required to be collected, as well as data categories permitted to be collected. The legislation also specifies, however, that the principal may collect and retain any information that, in his or her view, is conducive to the improvement of the instruction of the pupil.

Further complications arise when we examine the legislative structure of the new regulations attendant upon the "Bill 82" amendments. For example, O.R. 554/81 specifies the data required for the classification and placement of the exceptional child. In particular, this regulation requires: (1) "an educational assessment" for both the initial identification and placement of an exceptional child and the review of the placement, at least every year (O.R. 554/81, s.2(3)); and (2) "written reports and other evidence" (O.R. 554/81, s.10(1)). Does this suggest that the indirect consent inherent in the regulation negates the need to obtain direct parental consent for the educational assessments, written reports and other evidence cited"? The authors would think not.

It has been argued that policy memoranda that emanate from the Ontario Ministry of Education provide sufficient direction and clarification with regard to the conflict between different aspects of legislation. On the other hand, memoranda that do not have a direct relation to the statutes simply do not have the force of law, despite frequent misconceptions of the status of such documents.

Two OME memoranda (Nos.14 and 15, 1978-79) explicate in detail the collection of "required" categories which according to sections of the Act must have direct parental consent. These memoranda referred to in the previous chapter, are concerned with early identification and programming, and with the ongoing identification of children with learning disabilities.

The nature of the data required for the processes of early and ongoing identification and placement of both the non-exceptional and exceptional pupil suggests the need for a more rigorous direct consent procedure than that found in the memoranda. The authors of this report urge that these considerations be incorporated into our legislative structure.

Lack of such procedures may give rise to practices that the authors believe to be in conflict with the intent of present legislation. We are referring here to the practice of conducting assessments without obtaining direct parental consent if the assessment is not carried out by a registered psychologist. An array of practitioners may therefore participate with a given pupil in standardized testing and other assessment practices, with no parental involvement and/or consent. A number of boards attempt to justify such practices on the basis that parental hostility to or disinterest in the child's education make the task of obtaining consent for identification, placement, and appropriate program adaptation difficult, to say the least, and might in fact exclude a pupil from services that he or she needs. The authors are willing to recognize the dilemma facing educators: they are potentially liable in malpractice or disciplinary judgments, on the one hand, if parental consent and involvement is not obtained, and they are professionally impotent, on the other hand, if consent is withheld and the child's educational needs, as defined by the professionals, are not met.

Nonetheless, the authors cannot agree to construct an information management system around the very small minority of parents who may undermine, either purposely or unwittingly, legitimately motivated educational efforts by school personnel. On the contrary, it must be strongly argued that ignoring the parents' mandated involvement by consent--an act of the will--is a very dangerous practice indeed. Genuine disagreements between parents and educators may well exist, but compromise may be obtained at very early stages in the decision-making process if the principle of consent is well understood. Amending the silences and resolving the conflicts of the current Act and regulations may go far in preventing disagreements in this regard. The authors have argued against the provision, within the act itself, of the means of parental/student remedy for the abrogation of the rights and obligations of privacy and consent. The rationale for arguing against the incorporation of explicit avenues of redress into the Act is examined in Report No. 2 (pp. 87-88). Nonetheless, the authors emphatically recommend preventive measures to make educational personnel aware of the potentially serious implications, both educationally and legally, of abrogating the rights of privacy and consent. Failure to employ preventive measures will increase the likelihood of explicit remedy being incorporated into legislation.

C. Summary

Current regulations present a confusing range of data categories that may or may not, without consent, be collected and stored. These categories require consolidation within a framework readily accessible to practitioners, and should be accompanied by an umbrella of statutory and policy guidelines that set clear provincial standards regarding the definition, purposes and conditions of valid consent. This clarification will, in the authors' opinion, provide invaluable information and direction to educators, parents and students, creating protection within the legislative structure for one of the four significant privacy-related attributes.

Recommendation 36: that consent to collect or disseminate data be provided by elected representatives when and only when data are of direct educational relevance and required for pupil instruction, and that direct consent be obtained prior to the collection or transmission of all other data.

Recommendation 37: that a consolidated list of information categories required by legislation and school board policy for the collection or transmission of information be constructed for the guidance of principals and for the information of students and parents.

IV. ACCESS

A. Definitions

Access is the second of the four attributes of the legal-ethical dimensions in our model of information management. In chapter 2, access is defined as "the acquisition of the ways, means or liberties to view, acquire and/or use information about an individual's record stored in an information system." Somerville (1979) raises the question of the "ownership" of data and patients' access to medical files, but her discussion focuses on the need to expand the concept of valid consent to protect the subjects of medical experimentation, and so is not directly analogous to the situation in education.

Humphreys (1980, p. 87) suggests that "consideration of access must deal with at least two issues. The first is who shall control access. The second is who shall have access, what degree of access and under what conditions." From this perspective, personal information is regarded as the possession of the individual, and therefore legitimately within the rights of the student or parent to control.

B. Analysis of Current Requirements

Report No. 2 (pp. 110-116) examined case law relevant and/or analogous to the question of access to pupil records. The study looked at various judicial decisions, along with the Statutory Powers Procedure Act and the principles of disclosure and natural justice. Discussion of the implications of the recent federal Young Offenders Act and Charter of Rights and Freedoms, together with provincial court rulings across the country, underlined the growing emphasis on due process and equitable access to all sources of information on which decisions affecting an individual (or a board) may be based.

In light of these rulings and entrenched principles, the Act's provisions for the student/parent access to and control of the student information necessary for determinations and upon which decisions are made, are in general, forward-looking. If further strengthened they may prevent litigious action, especially with reference to procedures and appeals related to "Bill 82."

Why should preventive measures be required? Access to the OSR by the pupil and by the parent of a minor student is guaranteed by the Act in the following words: "A pupil, and his parent or guardian where the pupil is a minor, is entitled to examine the record of such pupil" (Act, s.237(3)). No restriction to that access is placed on the pupil, who always has the right of access regardless of age. The parent has unrestricted access to the record until the child's eighteenth birthday, and has no access thereafter without the permission of the pupil.

Access is also given to supervisory officers and to the teachers and principal of the school, without requiring the direct consent of the parent/student (Act, s.237(2)). However, such access is supplied for limited purposes only, including: (i) "the improvement of instruction of the pupil" (Act, s.237(2)); (ii) the preparation of reports, required by the Act or the regulations (Act, s.237(6a)); (iii) the provision of information "required by the Minister or by the board" (Act, s.237(7)); and (iv) for "the purposes of a disciplinary proceeding initiated by the principal" (Act, s.237(13)).

In summary, the direct consent of the student/parent is required for direct access except in the specifically authorized situations listed above and by the specifically authorized personnel. Are these requirements sufficient to speak to the issue of access?

The greatest strength of the present Act and regulations is the simplicity with which the access provisions are stated. As a consequence of that simplicity, few administrative personnel have any doubt about the procedures that are necessary in order to abide by the Act. The parent, student, and specified school personnel have access; others do not have access without the direct consent of the parent/student.

It must be noted, however, that our field-based enquiry into current practices across the province found a degree of professional concern, perhaps even of alarm, over access requirements. This concern has led to censorship of potentially useful OSR materials by teachers and other professionals, and to a proliferation of unregulated files in many boards. The not uncommon assumption, incorrect though it may be, has been that it is acceptable to withhold information from parents and students as long as the information is housed in a file separate from the official OSR.

The authors of this report are not prepared to argue that all information about students and families that is collected, known, and stored must remain in a single undifferentiated file, namely the OSR. All student information must, however, be considered an integral part of the student information system and hence be accessible and/or regulated, in keeping with the legislation and regulations whenever that information can be identified with an individual and affects education-related decisions (see recommendations 13 to 16). If student data are in fact collected and stored to improve pupil instruction, then the subjects of that information have a right to know the data base from which critical as well as routine decisions are made.

It was anticipated that the research project should find departures from the requirements of section 237 of the Act concerning disclosure; that such departures should occur as often as they did, and that the level of authority of those departing from the regulations should be so senior in many cases, was both unanticipated and gravely disturbing.

The authors' observations that student or parental rights of access are consciously being bypassed in some schools and in some school boards reflects the serious concerns and questions of the practitioners about the function of student information, the critical relationship between an accurate data base and educational decision-making, and the very real dilemmas confronting teachers, other professionals and administrators regarding the most reasonable, competent and just way to meet students' needs. Virtually all groups were candid and frank in revealing to the research team their systems for managing the multitude of files that at present exist in schools and central board offices. These include OSR files, early identification tracking files, "Bill 82"-related minutes, agendas, and files, special education files, guidance and student services files, psychologists' files, teachers' files, consultants' files, administrators' discipline files, attendance files, social workers' files, and so forth. The existence of multiple files and the problem of their control raises serious questions about the effectiveness of present procedures in managing the administration of student information.

We observed, for example, cases in which information specifically identifying a pupil was consciously and explicitly used to prescribe modifications to the student's educational placement and program, while being denied to the student or parent even upon direct request. Denial of access ranged from outright denial of the file's existence, to casual and effective discouragement of the parents' "worries" about "professional" matters. At the same time, information was shared with and transmitted in written form to third parties outside the jurisdiction of the school board, without parental consent being sought or obtained.

Recommendation 38: that student/parent access to the SIS be defined to include access

> to all elements of that system, with the sole exception of the strictly confidential working notes, files or records of a professional, which are not accessible to any other personnel in the educational system or outside it.

The need for more active control of student information practice was further underlined by the conclusions of our research with various boards, officials, outside agencies, and parents involved in procedures related to "Bill 82," and by our survey of the minutes of thirteen "Bill 82" appeals. These conclusions suggested that preventive policy and practice, based upon comprehension of the principles of fair practice, with regard to information management and shared decision-making, would have made the acrimony unnecessary and possibly prevented the appeals.

It is also interesting to note that the parents who "won" their appeals, by and large, were represented by lawyers. One board's response was to suggest to parents, informally but effectively, that they not attend appeals with lawyers at their side. A more positive approach would involve the recognition that the interests of the child would be better served by co-operation: the parent/student could be provided with appropriate information with which to question official decisions without having to resort to adversarial contests between the board's and the parent's legal counsellors. In this way, it might be possible to avoid the entrenchment of adversarial relationships in educational decision-making. Such a theory is buttressed by the results of a review of the largely avoidable "Bill 82" appeals undertaken during the course of our research.

The research team also found examples of co-operative endeavour in many schools that actively, conscientiously informed parents of their access rights to pupil records. We came across principals who had developed innovative programs for initiating and sustaining parental involvement. We encountered teachers who welcomed information-sharing with parents. It is our impression that although hostility or distrust may arise in any student and parent population, fear of these inevitable but rare responses should not control the governance of student records. Further analysis, less impressionistically conveyed, of the components of an educational system most conducive to home-school partnerships and most supportive of the creation of customized programs, the effective utilization of records for decision-making, and of professional sympathy with the concept of accountability may be found in Safer, Lewis, Morrissey & Kaufman (1978) and Yoshida & Gottlieb (1977).

There are several problems related to access that daily confront and aggravate educators. One such problem is confusion in the definition of "parent," and in the many different interpretations of the term made by the public. Legislation provides little guidance for the school principal who must sort through these problems. Clarification in the Act or its regulations is required. This issue is dealt with in more detail in Report No. 2 (pp. 118-122). In general, while all possible combinations of family and marital relationships need not be specified and addressed in the Act itself, some guidance is required to assist principals in making decisions in these matters. This guidance should be formulated in legislation and in board policy.

The provision of copies of the student record to students/parents has also caused problems in some jurisdictions. The authors believe that the reluctance to provide parents and students with copies of the pupil record is somewhat anachronistic, and permissive redress of this problem should be accommodated in revised legislation. Unless there are exceptional reasons to decide otherwise, the "out of pocket" costs of providing such copies should be borne by the parent or student.

Recommendation 39: that where a student or parent requests a copy of SIS materials to which the student or parent has access, such a copy be provided and the "out of pocket" cost of duplicating such materials be borne by the student or parent.

The final question to be addressed arises from the dual-access clause in the Act regarding pupils and parents. Situations can arise, particularly at the secondary school level, in which a student may wish to restrict the dissemination of information in opposition to his or her parents' wishes. The Act is quite explicit in this regard, giving the parent of a minor student full rights of access to and/or dissemination of any information in the OSR. But other analogous laws, such as the Public Hospital Act, permit persons under the age of eighteen to make significant decisions without parental concurrence. Reconsideration of the issues arising from this conflict is necessary. The authors have discussed them more fully in Report No. 2 (pp. 126-127), and it will only be noted here that they suggest that entry into secondary school (grade nine in the separate school system) should spell the end to unilateral parental control of student information. It would seem more reasonable to permit the parent alone to control access to the records of a pupil only as long as the pupil only is at the elementary level. Shared control of access between parent and pupil could be facilitated from the time of the student's entry into a secondary school program until he or she is eighteen years of age. Shared control could be arranged by providing the parent and student with a veto over access to the record by third parties, but not over access by each other. Finally, the parent should relinquish control on the student's eighteenth birthday, and access henceforth should be controlled by the student alone. Mechanisms to accommodate exceptional situations should also be developed.

Recommendation 40: that sole control of access and consent be granted to the parent while the pupil attends an elementary school, up to and including grade eight, within both public and separate school systems.

Recommendation 41: that shared control of access and consent between the parent and the pupil be granted from the time of the pupil's entry into a secondary school program, beginning at grade nine in both public and separate school systems, and until the pupil's attainment of eighteen years of age.

Recommendation 42: that sole control of access and consent be granted to the pupil upon the pupil's attainment of eighteen years of age, unless there is a reasonable cause for continued shared control while the pupil remains in school.

Recommendation 43: that where a parent is incapable of exercising control over access and consent, mechanisms be developed to ensure third-party advocacy for the child.

Recommendation 44: that the principal be able to authorize access to the school-based SIS by persons who stand in a reasonably demonstrated substitute-parent relationship to the pupil; access should be on the same basis as that granted to natural and adoptive parents.

Recommendation 45: that the principal be required to establish the identity of persons unknown to the school prior to granting them authorized access to the SIS.

Recommendation 46: that the principal refuse access to the SIS by a separated or divorced parent only upon provision to the principal of a duly constituted court order prohibiting such access, or as noted in Recommendation 47.

Recommendation 47: that where, in the considered judgment of the principal, access to the SIS by a separated or divorced parent will place the child or a third party in a situation of direct jeopardy, parental access to the student's record be refused; approval of the principal's written statement of the basis for such judgment must first be given by the appropriate supervisory officer; the reasons for refusing access and the time period to which the prohibition applies must be stated.

C. Summary

We have seen that the current requirements which demand the direct consent of the parent and student before entry to the files can be gained (with the specified exceptions of supervisory officers, teachers, and principals) are sound and are clearly stated, but require modification. Problems associated with such requirements are not unexpected, due to the complex nature of the issue. Similarly, it is not surprising to find that the operating definitions of "parent," thanks to a changing social system, have led to difficulties.

The discussion in this section has proposed modifications and preventive measures to strengthen and safeguard the current access procedures, while permitting some flexibility to accommodate the complex nature of school business, family relationships, and their impact on the student. The proposed modifications must eliminate impediments to the services to which students are entitled. They must also safeguard the basic principle of the individual's right to control personal information. Such protection for students in the Ontario educational system will be best ensured through the adoption of province-wide legislative standards, establishing student information as a dynamic decision-making tool to be shared by educators, professionals, students, and parents acting in concert to improve pupil instruction.

V. SECURITY

A. Definitions

Security is the third of the four legal-ethical attributes of the information management model previously presented in chapter 1. In chapter 2, security is defined as "the protection of information against accidental or malicious loss or damage and/or disclosure to unauthorized persons." The absence of policy and operational requirements ensuring security immediately calls into question the consent and access provisions discussed above and may in fact undermine the legitimate use of student records.

Martin (1976) suggests that security provisions must contain a set of specified procedures which not only attempts to prevent security breaches, but also minimize the damage should they occur. In other words, protective measures must secure the file, first by attempting to prevent the possibility of damage and unwarranted disclosure, and secondly by introducing procedures, such as recovery measures, which reduce the extent of any damage that does take place. Does our current legislation provide such measures?

B. Analysis of Current Requirements

The present legislation was designed when the OSR was more limited in content and use than recent amendments to the Act demand. Furthermore, Section 237 of the Act was designed for a paper-based data system. As mentioned above, the computerization of data presents problems in the control of student information significantly different from those that must be dealt with when records are retained on paper. One such problem is the ease of undetected unauthorized access to data without the consent of students, parents, or the appropriate educational administrators. While technical methods curtailing unauthorized file entry are available, they remain optional under the present paper-oriented regulations. Current legislation may thus be inadequate to control electronically-stored data, which may be vulnerable due to the new capacities for the rapid retrieval and manipulation of large quantities of information about many students. Although the issue is one of critical importance, legislative control of computer data theft and tampering is essentially non-existent.

It may appear premature to require a reconsideration of security concerns prior to the full implementation of "Bill 82" and at a time when more traditional methods of student record-keeping are still utilized. However, the momentum of accelerating demands for personal information, coupled with rapid computerization in some boards, may combine to render security regulations ineffective unless preventive policies are enacted immediately. Moreover, as boards are currently implementing new programs and new methods of data storage, the attendant security problems already exist. It would be more prudent to initiate planned development of legislative and policy controls rather than suffer the consequences of ad hoc measures arising from crisis situations.

Our recent research corroborates a previous survey (Humphreys, 1980), indicating that in practice, boards frequently and optimistically rely on the technical expertise of data managers as their sole security measure. Furthermore, the current proliferation of non-regulated files not only circumvents present legislative intent and contravenes consent and access provisions, but also jeopardizes the security of the data.

Security of information is not dealt with in great detail by the Act or by its regulation on student records. It is essential that legislation in this particular area state clearly the degrees to which security must be enforced, the officials responsible for its enforcement, and the obligations imposed upon individuals who may be required, as a duty, to work with the records.

Because the OSR was established originally as a school record, most legislative references reflect the school-based nature of the administrative process. As a consequence, the principal plays a central role in determining the practices employed in record administration. While the school-based record should remain the major focus of the SIS, the demands of "Bill 82" place a greater responsibility on central and/or regional office administrators to ensure the effectiveness of record-keeping practices which now have substantial legal and administrative implications. The authors of this report suggest that modifications regarding authority for the records are necessary to accommodate the needs of the parent and/or board officials to protect, in a legal arena, both the interests of the child and of the school board.

The current legislation makes only two security-related statements: one affirms the principal's duty to establish, maintain, transfer, and dispose of pupil records (Act, s.236(3)), and the other asserts every person's obligation to preserve secrecy regarding the contents of pupil records (Act, s.237(10)). All other references relate primarily to the physical properties and integrity of the record and its transfer. Since neither the regulations nor the Act itself specifies how or to what degree the records are to be secured against "accidental or malicious damage and/or disclosure," this constitutes an unfortunate statutory and regulatory silence on several critical issues, including the question of the designation of responsible officials at the different levels of the educational system.

Recommendation 48: that appropriate regulation, policy, and operating procedures be developed at provincial and board levels to ensure the security of electronically-stored data where existing legislation is silent or insufficiently protective of such security.

The aforementioned field research suggests that legislative attention to security will not in itself serve as more than a first step. Disregard for security and the lack of policy and resource support for personnel who are attentive to security must also be overcome at the board level. While many secondary schools have locked cabinets in which to store the OSRs, many professionals working in schools or regional and central offices fail to lock either the school files or their own files, drawers, desks, or cabinets. This lack of attention exists despite the substantial amount of sensitive data retained in private notes. Elementary schools with a lesser resource base have fewer locking cabinets, and, in general, an even weaker emphasis on security. Teachers on occasion store OSRs in classrooms for ready access and do not secure the records from unwarranted intrusion. Few schools have paper shredders, and disposal methods range from dumping old reports into wastebaskets to destroying the materials in the home fireplaces of staff.

Recommendation 49: that procedures be instituted to ensure the destruction of redundant and purged materials under conditions that protect the security of data and information.

The fact that boards in the process of transition from paper records to electronic data bases have not always given careful or even minimal attention to data security is equally worrisome. Several have been forced to grapple with awkward and expensive technical complications when attempting to introduce security restrictions as an "add-on" venture. After-thought security provisions may well be unable to curtail the inappropriate uses of student information.

Does "Bill 82" affect security requirements? The legal and practical implications of the amended Act make it imperative that certain types of information, until recently regarded as unimportant, be available to protect the interests of both students and school personnel. Moreover, such data may originate in a variety of non-school sources, further complicating record management. Documentation of the decisions, data, and processes used in reaching decisions on educational needs, programs, and placement will play a significant legal role as "Bill 82" is implemented.

One of the results of these expanded demands on the school system is the need to query whether the principal of a school is or should be required to be sufficiently knowledgeable about legal processes to bear the full responsibility for judging the import of the various types of data. Certainly the principal will be required to make on-site decisions about data retention, and guidance and learning opportunities should be provided to assist in such decision-making. Recommendation 33 addresses that need.

It should be stressed that the authors have concluded that effective security measures will depend on the assignment of record management supervisory responsibilities to a senior official of the board. Reallocation of authority should be embedded in the regulatory provincial framework, thus ensuring system-wide attention to and accountability for security. Such modification should not only provide the necessary support to principals and boards as "Bill 82" takes effect, but should also effectively strengthen the protection of student privacy. Whether a board would choose to delegate to a senior official the adjunct role of guiding educators in the use of relevant student data in decision-making will, of course, depend on the staffing patterns and preferences within each board. What is regarded as crucial from a province-wide perspective is that the management of student data, including the institution of effective security measures, be thorough, consistent, and sustained.

Recommendation 50: that each board appoint a supervisory officer to be responsible for the management of the SIS, including the preparation of policies and guidelines to assist principals and students/parents in issues related to record management.

The researchers are aware that boards are at present struggling with many new legislative and policy demands placed on systems which concurrently are faced with shrinking resource bases. We do not, however, perceive information management and its protection as an isolated or segregated demand. While readers are again referred to Reports No. 1 and 5 for a fuller elaboration, here it is sufficient to emphasize that the primary purpose of the record is to improve pupil instruction. The process of ongoing identification, curriculum and program development, evaluation, and modification, the rational allocation of special supports and services and the efficacy of the match between pupils' educational needs and the programs provided by teachers and schools cannot occur in a vacuum. A viable record system will not hinder the work of educators, but will facilitate the carefully monitored match between pupil needs and programs, and will allow for the incorporation of a number of valuable perspectives into each pupil's education.

Provision of information, however, most particularly the provision of detailed, sensitive, and well-managed (efficient) data banks, be they paper-based or electronically ordered, demands concomitant protection. The Act deals with unauthorized disclosure by specifically requiring all persons to "preserve secrecy." Nonetheless, we have seen that the Act's requirements need strengthening, and that board policy and practice must correct non-compliance with legal standards.

While the secrecy of contents is a central issue of the security question, it is also important to consider the problems associated with unauthorized changes to or deletions from the record contents. Legislative requirements and/or codes of ethics may address this problem for professional employees, but many school board personnel, including secretarial, clerical, data-handling, student-teacher and volunteer personnel are subject to no such regulations concerning confidentiality and security. This problem could be ameliorated by requiring all those who work with student records to affirm their responsibility to safeguard the integrity of the data.

Recommendation 51: that each school system employee, including support, clerical, and data-handling staff, who works with student data and information, explicitly affirm his or her intention to protect the security and integrity of such data and information.

The loss of critical data is yet another security problem. The efficacy of the information system depends on the continuous collection and maintenance of data that are relevant to decision-making. Documentation of decisions, of the data employed in the decision-making process, of teaching and learning processes, and of evaluations of the effectiveness of programs are all important in the management of the student's education. Historical, assessment, and/or legally critical data may be irreplaceable, and their loss may seriously affect the student. The replacement of such data, where possible, may require extensive and expensive re-testing and re-assessment. Such losses must be prevented as much as possible, and where data loss occurs, replacements must be available.

At present, there is no legal requirement to maintain back-up files, to recover data lost through accidental or malicious causes such as fire, vandalism, theft, or electronic malfunction. Technological developments allow the duplication and non-cumbersome storage of critical data and documents. Such protective measures, however, require a recognition of the importance of student data and a re-alignment of priorities to permit the allocation of the necessary resources.

Recommendation 52: that the principal's duties be amended to include the responsibility for the currency of school-based pupil data and their protection from damage, loss, unwarranted disclosure, and unauthorized use.

The current absence of requirements upon educational administrators to systematically ensure the currency and relevance of data retained in their files must also be considered. Periodic culling of the records should be carried out within the context of consistent maintenance procedures. Useful materials retained in the record for bona fide use by a school should be passed on to the next school, unless there is valid reason for removing the material. All too often, records are purged unnecessarily when they are forwarded to another jurisdiction, thereby reducing the utility of the record. Retaining extraneous material needlessly complicates the use of the record, but purging only at transfer may remove important material. Since record maintenance is essential to efficient use, routine checks must be carried out with the purpose of pupil instruction firmly in mind.

The proliferation of files makes it extremely difficult to ensure the security of student information. Unfortunately, such proliferation is related to the increases in use that occur as a greater number of decisions is required by a wider spectrum of participants. There are no current and clear regulations, and no references in the present Act designed to limit such proliferation. There is an unfortunate tendency for decision-makers who are furnished with information to retain all the data, and to initiate new files with each set of newly acquired information. Such tendencies should be resisted. The need for pupil information in order to arrange an appropriate special educational placement does not require the proliferation of myriad lists, agendas, minutes, and binders containing composite and sensitive information. Furthermore, security requirements should include effective procedures for the destruction of all copies of data and materials that have been employed in decision-making and are no longer needed. Discarding such materials carelessly, or eliminating some but not all copies, weakens all the security measures and the principles upon which such procedures are based.

Recommendation 53: that professionals who maintain information in their notes, records, and files that can be identified with an individual student and that is kept separate from the OSR folder be responsible for the security and integrity of all such materials.

Recommendation 54: that implementation of the SIS index commence September 1, 1985, for all students entering a school system for the first time and be continued each year thereafter; this index should be maintained in the documentation file.

C. Summary

The implementation of information management systems with preventive and back-up security measures is clearly in the best interests of pupils, parents, and education personnel. The increased demands on the educational system arising from "Bill 82" suggest the need for the appointment of a senior educational official to be responsible for developing appropriate systems at the board level. Both legislative requirements and resource supports should be forthcoming from the province in order to ensure the provision and protection of a viable, dynamic, and secure pupil record system. Significant information must not be lost, destroyed, or abused. Irrelevant or destructive information--and all copies of that information--must systematically be destroyed. Regulations and policies emphasizing the importance of the secrecy of records must be developed and provided to all persons who handle pupil data. The need to incorporate security measures into electronic systems is at least as important as the consistent use of lock and key.

Recommendation 55: that each school board provide appropriate and sufficient services, equipment, facilities, and resources necessary to ensure the security and integrity of student records retained in or by the school and school system.

Recommendation 56: that province-wide funding formulae and mechanisms ensure the provision of financial support for student data management, thus enabling boards to construct and manage the SIS effectively.

VI. INFORMING

A. Definitions

Informing is the last of the four legal-ethical attributes of the generic model of information management. The exercising of rights by the subjects of an information system depends upon their being informed of the conditions which govern the system. To be effective, a student information system will inform its subjects of: (i) their rights and obligations regarding the system; (ii) the existence of all files that concern them; (iii) the uses and users of the information; (iv) the procedures the subjects may use to examine, correct, and/or delete information in the record; (v) the safeguards employed to protect the record; and (vi) the authorities responsible for the record.

In chapter 2, informing is defined as "the notification of persons of the existence, purpose, contents and processes relating to the record or records maintained about them, or in which they have a bona fide interest." Such notification would provide the person with an opportunity to know of the records' purpose and use, their contents, the correction and purging processes, the access and control processes and the officials to whom inquiries can be made.

B. Analysis of Current Requirements

In the opinion of the authors, the present Act does not require that parents or pupils be provided with the information that would permit them to exercise their rights effectively. Previous surveys of parent/student awareness of records suggest widespread ignorance (Humphreys & Elwood, 1976; Humphreys, 1980), and our current research corroborates this discovery. As we have pointed out in our discussions of consent and access, the field research shows that neither board policy nor professional practice compensates for the silence of the legislation.

Humphreys (1980, p. 113) suggests that "the first necessity is for the school system to inform itself as to the purpose and functioning of its information system" and to do so explicitly. This can be initiated by giving system-wide attention to the definition of the legitimate purposes of student records and to their effective management. Professional pre-service and in-service activity on the part of school system personnel is also an essential part of any effective self-informing process. We have also alluded to the value of welcoming parents' contributions to their children's education. This section, however, rests on the fundamental principle that it is the obligation of the manager of the student information system to fully inform the subjects of the governance, purposes, and uses of that system.

Recommendation 57: that the legislative framework explicitly states that students and parents be provided with the opportunity to be fully informed of the existence, contents, and uses of the SIS and its management system.

Recommendation 58: that students and parents be provided with the opportunity to be fully informed of the procedures governing, and the officials responsible for, the management of the SIS.

Recommendation 59: that students and parents be provided with the opportunity to be fully informed of the rights and obligations of practitioners, parents, and students with respect to the SIS.

A more detailed inventory of the requirements in the Act and its regulations concerning the obligations to inform can be found in Report No. 2 (pp. 158-160). The requirements are, however, far from explicit, and have not generated sufficient regard for the principle of the right to be informed.

If students and parents are to be truly informed, the information they receive must be complete and non-technical. It should be conveyed in several forms and at frequent intervals during the course of home-school communications. The information must of course be provided in a language that is comprehensible to the parents and students. Interested parents and students must be given the opportunity to ask further questions, receive clarification, and/or be directed to the official responsible for the records should a serious query or dispute arise.

Recommendation 60: that students and parents be provided with the opportunity to be informed, as specified in Recommendations 57 to 59, upon the establishment of the pupil record, upon the transfer of a record into the school system, and at periodic and regular intervals thereafter.

Recommendation 61: that each communication used to inform students and parents about pupil records, rights, and obligations be complete, non-technical, easy to comprehend, and in a language accessible to the students and parents.

It should not be difficult to improve communication with regard to student information. It would be efficacious for boards to review, for example, the vocabulary and processes employed in communicating "Bill 82" decisions, requests for consents, notices of appeal rights, and other forms and letters sent to parents. Some boards have devised communications that are not only technically correct, but also non-coercive, easily understood, and truly informative. They have devised guides for parents and communication techniques that observe the intent as well as the technical requirements of "Bill 82." Unfortunately, anecdotal research data suggest that such boards are in the minority. It would be to the advantage of parents, students, and practitioners if positive approaches already in practice could be emulated by other boards.

It would be prudent to provide repeated opportunities for parents and pupils to be informed of their obligations and rights. Communication and informing through various mechanisms, must address the needs of all children and all parents, throughout the students' careers. While the achievement form remains a useful vehicle for record-related communication with parents, the vocabulary employed needs to be somewhat less technical and less circumscribed in its tone and contents than at present. Parent nights and interviews provide an excellent forum for informing about student information systems. Opportunities to inform also are available when the child first registers in the educational system, and/or when a child transfers into a public or separate school system from another system, or from a private or out-of-province school.

Recommendation 62: that guidelines for and prototypes and examples of appropriate communication informing mechanisms be developed and disseminated to boards for use as modifiable resource materials to inform students/parents of record-keeping policies, practices, and management.

Undoubtedly some parents will not find such opportunities germane to their interests and priorities, just as some educators disregard the importance of student information. Nonetheless, the consistent provision of the opportunity to enquire into the pupil information system should be consistently offered. The province could assist boards in the development and distribution of modifiable prototypes of handbook or newsletter sections addressing these issues.

C. Summary

The informing of subjects is a critical safeguard of individual privacy, and as such is a significant criterion in judging the effectiveness of the management of student records. Both students and parents should be provided, on a regular basis, with the opportunity to become fully informed of the existence, contents, uses, and safeguards of pupil records.

The explanations should be complete, non-technical, easy to comprehend, relayed in language accessible to those involved, and offer opportunity for further questions. The province can provide leadership in this regard, not only through legislative amendments regarding the rights of parents and students to be fully informed, but also through the provision of modifiable resource materials that can assist boards to initiate and sustain effective exchange of information on the use, functions, and management of pupil records.

CHAPTER SIX:
PRESENT USE OF STUDENT INFORMATION

I. INTRODUCTION

This chapter serves as a summary of our field research on student information systems across the province of Ontario. The research was designed to supplement task 1's review of the literature and task 2's examination of the legal implications of Bill 82 to student information management. Tasks 3 and 4 intended to determine the present status of student information processes and use in the schools and school systems of Ontario.

Two distinct study tasks, with different aims and approaches, were originally proposed. Task 3 was to be an intensive study of the record keeping systems of a small sample of school boards selected as examples of the delivery of special education programs. It was expected that intensive interviewing of personnel at the school and central office levels of these boards would provide information about common record keeping practices which would not only illustrate the basic requirements and preferred practices for all student record systems, but would also provide a baseline of performance standards. Task 4, on the other hand, was to be an extensive study of existing record keeping practices in a wide variety of boards across the province in order to provide a broad picture of the existing practices and variations in the management of student information. The original research strategy was to capture such data through interview/survey sampling methods and by sampling existing student records.

The selection of a small group of exemplary boards delivering special education programs proved to be operationally impossible, and was eliminated for two reasons. Firstly, it was impossible to objectively select a set of criteria that could lead to a consensus of exemplary practice on a board-wide basis. There were also ethical concerns within the research group about the implications of such an approach. Secondly, the team felt that if it altered its methodology, the research would be more effective in meeting the project's overall objectives. Early in the project, therefore, the study team revised its research design and was able to develop a questionnaire/interview schedule which allowed for both extensive and intensive analysis of record keeping practice. The instrument was based upon the generic informational, systemic and legal-ethical attributes of information systems housing data about people. The generic model was respected throughout the research, and the changes in design increased the overall sample size as well as the depth of the analysis. Thus, the two tasks were combined (methodologically and for reporting purposes) into one report, Report No. 3-4, which described and analysed the current status of student information systems practice across Ontario.

The research attempted to collect data on the operating characteristics of the data management systems of a sample of school boards across Ontario and on the actual contents of existing student records.

II. METHODOLOGY: ENTRY TO SCHOOL SYSTEMS AND SCHOOLS

The student record is protected by the Act (s.237) from access by unauthorized personnel. That being the case, the project team required authorization at a number of levels to ensure access to both personnel and records. This process required the justification of the research project and a thorough explanation of the methods project personnel would employ to protect the privacy and the interests of students, parents, personnel, schools, boards, and the Ministry of Education. As the research was to be conducted under contract with the Ministry of Education, a letter was requested to introduce the project personnel to the boards in the sample. This later proved to be very valuable.

Because of the sensitive nature of the study and the data to be collected, guidelines for the conduct of the research were developed and all research personnel were trained in procedures for maintaining the confidentiality of all materials and the privacy of all concerned, including schools, boards, their personnel, students, and parents, whose identity would not be revealed. Following this development and training process, the project leader wrote to the director of each board selected, to provide two documents: (i) Information Sheet, Student Records Research Project; (ii) Procedures to Maintain Privacy and Confidentiality: OSR Research Project (see appendix A). The project leader requested the board's participation and asked for the name of an official to act as a liaison person for the board. Upon receipt of a response, the project contacted the liaison person for the names of schools in order that a practical selection could be made.

Schools were selected within geographical or family groupings to ensure that there was a continuity of policy from elementary to secondary school and to permit the follow-up of data at both levels. The principals of the schools selected were informed of the project by the board and were asked for their co-operation in the project. On the whole, the co-operation obtained by this procedure was outstanding.

III. METHODOLOGY: INSTRUMENTATION

The two tasks attempted to ascertain the present state of student data management in Ontario schools and school systems. To accomplish this task, a variety of data collection methods were employed. Firstly, documents were collected from the schools and boards in the small sample to determine the degree to which their data management practices were explicitly stated and controlled through policy or guidelines. Secondly, intensive interviews were held with a wide variety of board and school personnel who were important in data management. Thirdly, questionnaires were completed by a similar group from boards included in the task 4 extensive study. Fourthly, a survey of a random sample of student records was conducted in all schools that were included in the study. In all, a substantial body of data was collected from the eighteen school systems that participated.

A. Document Analysis

Documents relating to student information were collected from each board sample and from each school sampled within the board. Each document was analysed to determine the degree to which policy and practices met the criteria presented in chapter 2. The documents relating to policy and procedure were also assessed according to the level of the system to which they applied. This analysis helped to assess the need for further policy development, as discussed in Report No. 6.

B. Interview Schedule

Personnel in eleven school boards were interviewed to determine, in detail, the use made of student information and the ways in which the information was managed. This task required the preparation and testing of two interview schedules. The first, for the central office personnel who carry out a number of specific functions noted on the schedule (appendix B), included questions on each function to determine: what processes and people were involved; what documents and data were produced; and what happened to the developed data. Questions concerning the control and management of data were also included. The second interview schedule, for school personnel, asked the same types of questions but related the responses to the school functions of the respondents. A small sample of parents and students was also interviewed to discover their experiences relating to the OSR and to determine the source of their knowledge of it.

C. Questionnaire Survey

Questionnaires (appendix C) were sent to personnel in twelve boards across Ontario and a selection of schools in each board of the sample to gather on a wider basis similar data to those obtained through the interviews. Here again, respondents were asked to identify, from a list provided, the functions that they carried out as part of their role. For each function, the survey ascertained the processes and personnel involved and the sources, uses, and disposition of the different types of information. Finally, the respondents described the management practices of the school or school board as they perceived them.

D. Survey of Ontario Student Records

A random proportional sample of student records was surveyed in each school to determine the degree to which current records met the criteria discussed in chapter 2. (The schedules are provided in appendix D). Three approaches were required. Firstly, records in the school were selected at random from OSR files. Data were collected from each record, and the type of data, its currency, and the completeness of data categories were indicated. Individual staff members were questioned to determine whether any other file existed in the school containing data that could be identified with a specific student. Secondly, where such other files were discovered, information was sought on the files' use, their disposition and their contents. Thirdly, the principal of the school was asked whether a central office file existed on any student whose record had been selected, and these files, along with those containing references to special education, were followed and checked against central board special education files. Similar questions were asked of these central and other files, where they existed, as were asked of the OSR.

E. General Considerations

The field study represented an attempt to ascertain and describe the functioning characteristics of student information management. The questionnaire/interview schedule was designed so that each person came within a subset of fifteen pre-defined functions that described the operating decision-making areas potentially reliant upon student information. These functions ranged from registration to promotion at the school level, and from health monitoring to reporting to the board of directors at the central office level. Although there appears to be some overlap in the functions at the school and central office levels, this is because of the use of similar terminology. In fact, little overlap exists.

IV. METHODOLOGY: SAMPLE

School boards were selected in an essentially random manner. The primary criterion for inclusion was, of course, willingness to participate. Key factors considered in the initial invitations to boards were diversity in geographical location across the province, student population size, language of instruction, public/separate jurisdictions, and the provision of programs for both "regular" and "exceptional" students. Within each participating board, schools were selected to provide representation of: all levels from kindergarten to grade 13; programs for children diagnosed as trainably retarded (TR); and vocational and other exceptional students participating in both integrated and segregated programs. The personnel from the central offices or schools were selected because of their roles, and were therefore not a random sample. However, a random sample of OSRs within each school was made. If the record selected was of a pupil who had been identified as a special education student, an attempt was made to determine whether a central board office had a file on the student. If such a file existed, it was examined, as was the school file, and the data obtained were considered in the analysis.

In all, eighteen boards co-operated, including one which served as a pilot. Within each board, a ten percent sample of schools was selected for study.

Eleven boards served as the intensive study sample. In these, personnel were interviewed and a three percent sample of student records was selected. Twelve boards served as the extensive study sample. In these, personnel responded to questionnaires and a ten percent sample of student records was selected for content analysis. Five boards acted as "overlap" between the two samples and were to all intents and purposes treated as intensive interview boards, but with a larger sample (ten percent) of records examined. Thus, the project employed six intensive, seven extensive, and five overlap boards. In high schools in the intensive study group, a sample of senior students and parents was interviewed whenever the principal felt it to be feasible.

V. RESULTS: DATA AND ANALYSIS

A. Introduction

The statistical data obtained from both interviews and questionnaires are sufficiently similar to permit them to be presented together. The school questionnaires and interview schedules will therefore be treated as a unit. Similarly, central office data, whether obtained by interviews or questionnaires, will be discussed as one body of data. A third category of information, arising from interviews with parents and students, will be presented on the same tables. Finally, the results of the content analysis of Ontario Student Records from school and central office files on individual students will be reported separately, but discussion will join the two sets of data.

The following is a summary of the data presented Report No. 3-4. A large number of tables were produced in that report, of which only a small proportion will be provided here. A list of the functions carried out by school and central administrative personnel, around which the interviews and questionnaires were constructed, is provided in table 3 in order to help the reader to interpret the data provided in the tables.

B. School Questionnaires/Interviews

Each respondent was asked to answer questions on up to four functions that the research team believed were performed in the school. By selecting different functions for different respondents, the research team attempted to obtain responses on each of the fifteen functions believed to take place in every school. The respondent was asked

Table 3: Functions Carried out by School and Central Administrative Personnel

Central Administrative Functions	School Functions
Early Identification	Registration
Student Placement	Early Identification
Administrative Data	Placement
Processing	Advising, Counselling
Psychological Assessment	Assessment (in School)
Ongoing Assessment	Assessment (on Referral)
Parent Counselling	Promotion
Program Design	Program Planning
Program Development	Home Contacts
Health Monitoring	Attendance
Staff Preparation	Discipline
Staff Supervision	Health Monitoring
Planning of Facilities	Scheduling
Reporting to the Board	Staff Supervision
Reporting to the Ministry	Reporting to the Board

to identify three types of information employed in each function and to answer specific questions on each information type. These questions centred on the processes employing information, and on the uses, sources, storage, and disposition of the data. In this way, data were obtained on a number of types of information employed in the performance of the necessary functions in each school (see table 3).

One thousand and ninety-three titles of participants active in the functions of the school were mentioned. These individual titles represented a total of twenty-three occupational categories with which classroom teachers and school administrators came in contact. While this range suggested that a wide variety of data would be required to meet professional needs, it should be noted that three of these categories, namely, principals/vice-principals (23 percent), teachers (19 percent) and public health or dental nurses (12 percent) make up over 50 percent of all participants. Surprisingly, parents and students represented eight percent and four percent respectively of references to participants. It is clear that data on students are used in functions carried out mainly by those persons who work as school or central board office personnel serving children, i.e., special education consultants, psychological/special services personnel, public health/dental nurses, principals, superintendents, and teachers.

Table 4 shows the types of information most frequently noted by respondents to the school questionnaires as "most important" for performing the listed functions. As one would expect, a high percentage of responses occurred for the data corresponding closely to each function (i.e., attendance data for the attendance function). It is noteworthy that the early identification function illustrated the widest range of data considered to be important (almost every category was cited). Assessment in school and assessment on referral were also seen as functions that required a wide range of information. Teacher assessments, individual demographic information, and health histories appeared to be the types of information most often used. At the same time, early identification, assessment on referral, placement, and health monitoring appeared to be the functions that required the greatest range of student information.

It appears from table 5 that data were collected when required, although registration is an active period when data were provided. Few data are collected upon request or upon referral, except for those functions one would expect. The classroom teacher, the parent, and the student, in that order, appeared to be the persons most frequently sought for information (table 6), while early identification and health monitoring appeared to be those functions which required the greatest range of people to supply data.

Documents and records would seem to be a good source of student data. The documents from which data were gleaned to perform the functions identified by our research ranged from health records to OSR forms (table 7). The functions which employ the greatest range of documents tended to be placement, early identification, assessment in school, home contacts, and attendance. It is surprising (and even

Table 4

TYPES OF INFORMATION REPORTED AS IMPORTANT FOR EACH FUNCTION:

SCHOOL QUESTIONNAIRE

TYPE OF INFORMATION

FUNCTION	Number of Responses	Individual Demographic Material (%)	Report Card Information (%)	Health History (%)	Behaviour & Development (%)	Standardized Test (%)	Teacher's Assessment (%)	Attendance (%)	Early ID Screening (%)	Vision/Hearing Tests (%)	Miscellaneous (Outside Agency) (%)	Other (%)	No Data/ Error (%)
Assessment in school	84	6	20	4	2	19	26	2	1	0	0	5	14
Assessment on referral	78	10	5	28	13	6	12	0	0	10	4	1	10
Attendance	78	12	1	3	1	0	3	45	0	0	4	4	28
Discipline	96	13	6	1	17	0	11	3	0	0	8	13	27
Early Identification	60	12	2	22	2	3	12	0	23	5	10	2	8
Health monitoring	57	7	0	46	4	0	7	0	18	0	4	2	14
Home contacts	93	22	2	6	8	3	20	2	0	0	9	4	24
Placement	69	13	23	1	3	10	26	0	0	0	1	7	14
Program planning	78	3	19	0	1	5	14	1	0	0	12	26	19
Registration	105	17	15	22	5	1	4	0	0	0	8	7	22

Table 5

RESPONDENTS' REPORTS OF THE TIMES AT WHICH INFORMATION WAS COLLECTED BY FUNCTION:

SCHOOL QUESTIONNAIRE

		TIME						
FUNCTION	Number of Responses	As Required/ Continually (%)	Upon Request (%)	Annually/ Bi-annually (%)	At Registration	Upon Referral (%)	Other (%)	No Data (%)
Assessment in school	84	46	4	14	2	5	6	23
Assessment on referral	78	31	0	1	14	33	4	17
Attendance	78	50	0	6	3	1	8	32
Discipline	96	53	1	4	4	3	3	31
Early Identification	60	38	0	3	43	0	0	15
Health monitoring	57	40	4	4	18	12	12	18
Home contacts	93	56	0	6	10	1	1	26
Placement	69	38	0	12	19	4	4	25
Program planning	78	35	0	18	9	0	0	37
Registration	105	22	0	16	37	0	0	23

Table 6

RESPONDENTS' REPORTS OF THE PEOPLE FROM WHOM INFORMATION WAS COLLECTED FOR DIFFERENT FUNCTIONS: SCHOOL QUESTIONNAIRE

TYPE OF PERSON

FUNCTION	Number of Responses	Classroom Teacher (%)	Parent (%)	Student (%)	Principal/ Vice-Principal (%)	School Secretary (%)	Special Education Consultant (%)	Public Health/ Dental Nurse (%)	Outside Medical Personnel (%)	Guidance Staff (%)	Other (%)	No Data/ Error (%)
Assessment in school	84	26	5	11	4	2	8	4	1	5	11	24
Assessment on referral	78	15	12	18	4	1	3	1	9	3	21	14
Attendance	78	26	13	3	3	14	0	1	0	1	5	35
Discipline	96	32	7	9	1	3	1	0	0	1	12	33
Early Identification	60	8	23	15	0	0	0	13	12	3	17	8
Health monitoring	57	11	18	23	0	2	0	4	12	0	12	19
Home contacts	93	19	17	9	3	6	1	3	1	0	14	26
Placement	69	36	12	9	6	1	3	1	1	4	6	20
Program planning	78	22	5	12	5	0	1	1	0	3	14	37
Registration	105	10	25	14	1	0	0	6	7	5	9	24

alarming) that the OSR was not seen as more important in this regard. It may be that a great deal of data on other forms is retained in the OSR. However, it may be that the OSR is not as widely used, even as a repository, as was envisaged at its creation. Table 8 lists the most frequently cited places in which documents that have been completed for each function were kept. These ranged from the principal's office to "other." It is notable that half of the completed documents were "not retained." Documents resulting from early identification, followed by placement, assessment on referral and registration tended to be retained (frequency > 62%), but were retained in a wide variety of locations. Documents relating to other functions had about an equal chance of being retained or discarded. The OSR file and the school nurse's record were the usual repositories for these data. Table 9 shows that while the documents associated with all functions except attendance, discipline and program planning had a higher than fifty percent chance of being stored, they tended to be held primarily in three locations: the school office (not necessarily in the OSR), the OSR file (not necessarily in the school office), or the health unit files. Very little was noted as being held on computer file, except for early identification data.

Table 10 indicates, as one would expect, that data were answered mainly "as required," and "upon request." Table 11 shows that sharing tended to be most frequently accomplished through interviews. Interestingly, a third of the responses indicated that data were not shared. This was highest for the functions of discipline (44 percent) and program planning (42 percent).

C. Central Office Questionnaires/Interviews

There were only seven functions (of fifteen) reported on frequently enough in the responses to provide reliable results. These functions alone are presented in tables 12-19. Furthermore, the tables are presented without comment, because the data are not sufficiently clear to confidently allow conclusions to be drawn.

Tables 20-29 provide data gleaned from both school and central office questionnaires on information management processes. While the number of respondents was small, there were some interesting findings.

Table 20 shows the percentage of respondents who reported that consent was obtained prior to collection, storage, or sharing of data in OSRs and central office student records. While more than 65 percent reported that they acquired consent prior to collection and sharing data, only 30 percent obtained consent prior to storing. Consent was normally obtained (table 21) in written form; less than ten percent of cases cited "verbal" as a type of consent. Table 22 indicates that if the consent was gained, the written evidence of the consent was retained.

Tables 23 and 24 indicate that secretaries had access to the data prior to filing, after they were filed, and after they had been used, as did principals, teachers and nurses. Parents/students were cited as having access slightly more often than

Table 7

DOCUMENTS FROM WHICH INFORMATION WAS OBTAINED FOR EACH FUNCTION:

SCHOOL QUESTIONNAIRE

		DOCUMENT										
FUNCTION	Number of Responses	Health Records (%)	Early ID Forms (%)	Attendance Forms (%)	Achievement Forms (%)	Progress Report/ Student Profile Sheet/ Work Sample (%)	Registration Forms (%)	Standardized Test Forms (%)	Oral Information (%)	OSR Forms (%)	Other (%)	No Answer Error (%)
Assessment in school	84	2	1	0	7	11	1	14	0	13	11	39
Assessment on referral	78	33	0	0	4	0	0	9	0	5	13	36
Attendance	78	3	0	28	3	1	1	0	5	3	5	51
Discipline	96	1	0	2	8	2	0	0	2	11	25	48
Early Identification	60	30	15	0	2	0	0	2	5	3	12	32
Health monitoring	57	40	5	0	0	0	5	0	2	0	5	42
Home contacts	93	6	1	1	9	3	2	5	0	1	22	51
Placement	69	0	1	0	13	1	4	1	16	0	26	36
Program planning	78	0	0	1	6	8	0	0	3	5	27	50
Registration	105	14	1	0	0	1	22	4	4	6	17	31

Table 8

PLACES IN WHICH DOCUMENTS WERE RETAINED:

SCHOOL QUESTIONNAIRE

		PLACE						
FUNCTION	Number of Responses	Principal's Office (%)	OSR File (%)	Teacher File Binder (%)	School Nurse Health Unit Binders (%)	Other (%)	Not Retained (%)	(Retained) (%)
Assessment in school	84	0	24	7	0	8	48	(52)
Assessment on referral	78	1	17	1	36	4	37	(63)
Attendance	78	1	18	6	0	3	50	(50)
Discipline	96	5	23	1	0	4	50	(50)
Early Identification	60	0	22	12	27	5	30	(70)
Health monitoring	57	0	4	2	42	7	42	(58)
Home contacts	93	0	19	13	0	2	46	(54)
Placement	69	1	46	4	0	1	35	(65)
Program planning	78	3	8	17	1	2	54	(46)
Registration	105	9	26	1	9	2	38	(62)

Table 9

PLACES IN WHICH DOCUMENTS WERE STORED:

SCHOOL QUESTIONNAIRE

		PLACE							
FUNCTION	Number of Responses	School Office (%)	Computer File/ Mag. File (%)	OSR File Cabinet (%)	Teacher File Binders (%)	School Nurse Health Unit File (%)	Other (%)	Not Stored (%)	(Stored) (%)
Assessment in school	84	18	1	23	11	0	6	42	(58)
Assessment on referral	78	5	1	17	1	38	2	36	(64)
Attendance	78	19	4	15	9	0	3	50	(50)
Discipline	96	18	1	18	4	0	10	49	(51)
Early Identification	60	3	12	27	5	30	1	22	(78)
Health monitoring	57	9	4	2	0	47	0	39	(61)
Home contacts	93								
Placement	69	16	0	39	1	0	7	38	(62)
Program planning	78	24	0	8	17	1	3	47	(53)
Registration	105	21	3	22	11	13	1	29	(71)

Table 10

RESPONDENTS' REPORTS OF THE TIMES AT WHICH INFORMATION WAS SHARED:

SCHOOL QUESTIONNAIRE

		TIME								
FUNCTION	Number of Responses	As Required Continually (%)	Upon Request (%)	Annually/Bi-annually/ Tri-annually (%)	At Registration Pre-registration (%)	Upon Referral (%)	Prior to IPR (%)	Prior to Interview (%)	No Answer (%)	Not Shared (%)
Assessment in school	84	30	21	1	0	0	4	0	21	23
Assessment on referral	78	29	9	4	0	5	0	0	31	22
Attendance	78	21	27	0	0	1	1	0	16	35
Discipline	96	31	15	0	0	0	0	0	10	44
Early Identification	60	28	10	15	3	0	0	0	21	22
Health monitoring	57	23	18	2	0	11	2	0	12	33
Home contacts	93	30	12	3	0	0	1	1	18	34
Placement	69	25	14	1	0	0	6	0	20	33
Program planning	78	26	6	4	1	0	0	0	20	42
Registration	105	30	13	6	0	0	0	0	11	39

Table 11

WAYS IN WHICH INFORMATION WAS SHARED:

SCHOOL QUESTIONNAIRE

FUNCTION	Number of Responses	Interview (%)	Official Letter (%)	Informal Note (%)	From Official (%)	Other (%)	No Answer (%)	Not Shared (%)
Assessment in school	84	25	0	0	8	2	41	23
Assessment on referral	78	18	6	12	0	0	42	22
Attendance	78	8	4	0	0	0	53	35
Discipline	96	9	5	0	1	3	37	44
Early Identification	60	27	5	3	0	0	43	22
Health monitoring	57	0	0	0	0	2	65	33
Home contacts	93	10	3	2	2	0	48	34
Placement	69	14	0	0	0	6	47	33
Program planning	78	17	0	0	3	0	39	42
Registration	105	10	1	0	4	2	45	39

Table 12

TYPES OF INFORMATION REPORTED AS MOST IMPORTANT FOR EACH FUNCTION:

CENTRAL OFFICE QUESTIONNAIRE

		TYPE OF INFORMATION												
FUNCTION	Number of Responses	Individual Demographic Material	Report Card Information	Health History	Behaviour & Development	School Demographic	Staff Qualification	Standardized Test	Teacher's Assessment	Attendance	Vision/Hearing Tests	Miscellaneous (Outside Agency)	Other	No Data/ Error
Attendance counselling	15	2	2	0	1	0	0	0	2	6	0	1	0	1
Ongoing assessment	21	3	1	1	4	0	0	3	4	0	0	0	0	5
Parent counselling	15	4	2	1	2	0	0	0	2	1	1	1	0	1
Placement	24	2	6	2	0	0	0	2	7	0	0	0	1	4
Program design	15	0	2	1	0	1	0	1	1	0	1	0	0	8
Program development	21	0	0	0	0	1	1	4	3	0	0	2	2	8
Reporting to board	27	2	4	0	1	5	2	0	0	0	0	0	3	10

Table 13

RESPONDENTS' REPORTS OF THE TIMES AT WHICH INFORMATION WAS COLLECTED:

CENTRAL OFFICE QUESTIONNAIRE

		TIME								
FUNCTION	Number of Responses	As Required/ Continually	Upon Request	Annually/Bi-annually/ Tri-annually	At Registration	Upon Referral	Prior to Interview	Prior to IPR	Other	No Data/ Error
Attendance counselling	15	1	0	0	0	7	5	0	1	1
Ongoing assessment	21	6	1	2	0	1	3	0	0	8
Parent counselling	15	5	0	0	0	3	3	0	0	4
Placement	24	6	2	2	0	4	3	3	0	4
Program design	15	5	2	0	0	0	0	0	0	8
Program development	21	9	0	0	1	0	2	0	0	9
Reporting to board	27	11	1	0	0	0	0	2	0	13

Table 14

RESPONDENTS' REPORTS OF THE PEOPLE FROM WHOM INFORMATION WAS COLLECTED: CENTRAL OFFICE QUESTIONNAIRE

		TYPE OF PERSON										
FUNCTION	Number of Responses	Classroom Teacher	Parent	Student	Principal/ Vice-Principal	School Secretary	Special Education Consultant	Public Health/ Dental Nurse	Social Worker	Student Services Staff	Other	No Data/ Error
Attendance counselling	15	1	1	1	0	4	0	3	1	0	3	1
Ongoing assessment	21	6	3	2	0	0	2	1	0	1	1	5
Parent counselling	15	5	2	0	0	0	0	1	2	0	1	4
Placement	24	5	4	0	4	0	1	2	0	3	1	4
Program design	15	0	0	1	0	0	1	1	0	1	2	9
Program development	21	3	0	0	3	1	0	0	0	2	2	10
Reporting to board	27	0	1	0	9	0	0	0	0	1	4	12

Table 15

DOCUMENTS FROM WHICH INFORMATION WAS OBTAINED FOR EACH FUNCTION:

CENTRAL OFFICE QUESTIONNAIRE

		DOCUMENT											
FUNCTION	Number of Responses	Health Records	Referral Forms	Attendance Forms	Achievement Forms	Psychological/ Assessment Report	Progress Report/ Student Profile Sheet Work Sample	Registration Forms	Standardized Test Forms	Oral Information	OSR Forms	Other	No Data/ Error
Attendance counselling	15	0	0	7	1	0	0	0	0	1	3	0	3
Ongoing assessment	21	3	1	0	0	2	2	1	0	0	3	4	5
Parent counselling	15	1	0	0	0	0	1	1	0	0	1	4	7
Placement	24	2	3	0	3	2	0	0	0	1	4	5	4
Program design	15	1	0	0	0	1	0	0	1	0	1	3	8
Program development	21	1	1	0	0	0	1	0	0	0	1	4	13
Reporting to board	27	0	1	0	0	1	1	0	0	1	0	8	15

Table 16

PLACES IN WHICH DOCUMENTS WERE RETAINED:

CENTRAL OFFICE QUESTIONNAIRE

		PLACE						
FUNCTION	Number of Responses	School Office	OSR File	Central Office	Other	No Answer	Not Retained	(Percentage Retained)
Attendance counselling	15	3	1	5	1	2	3	(80)
Ongoing assessment	21	7	0	4	1	1	8	(62)
Parent counselling	15	1	0	4	0	1	9	(40)
Placement	24	2	3	12	0	3	4	(83)
Program design	15	0	0	6	0	0	9	(40)
Program development	21	6	0	5	1	1	8	(62)
Reporting to board	27	4	0	7	2	4	10	(63)

Table 17

PLACES IN WHICH DOCUMENTS WERE STORED:

CENTRAL OFFICE QUESTIONNAIRE

		PLACE						
FUNCTION	Number of Responses	School Office	Computer File/ Mag. File	Central Office/ Board	Teacher File Binders	Other	No Answer	Not Stored
Attendance counselling	15	5	0	4	0	3	0	3
Ongoing assessment	21	1	3	9	2	1	0	5
Parent counselling	15	0	3	5	3	0	0	4
Placement	24	3	0	13	0	2	0	6
Program design	15	0	0	6	0	0	0	9
Program development	21	7	0	5	0	0	3	12
Reporting to board	27	3	0	7	0	2	2	13

Table 18

RESPONDENTS' REPORTS OF THE TIMES AT WHICH INFORMATION WAS SHARED:

CENTRAL OFFICE QUESTIONNAIRE

TIME

FUNCTION	Number of Responses	As Required/ Continually	Upon Request	Annually/ Bi-annually/ Tri-annually	Prior to IPR	Other	No Answer	Not Shared
Attendance counselling	15	5	1	0	0	0	8	1
Ongoing assessment	21	8	6	1	0	0	0	6
Parent counselling	15	6	3	0	0	0	2	4
Placement	24	9	0	2	3	0	3	7
Program design	15	1	3	0	0	1	1	9
Program development	21	1	0	0	0	0	8	12
Reporting to board	27	1	3	0	0	0	5	18

Table 19

WAYS IN WHICH INFORMATION WAS SHARED:

CENTRAL OFFICE QUESTIONNAIRE

FUNCTION	Number of Responses	Interview	Official Letter	Informal Note	From Official	Other	No Answer	Not Shared
Attendance counselling	15	4	0	0	0	2	8	1
Ongoing assessment	21	3	1	0	0	1	10	6
Parent counselling	15	7	0	0	0	0	4	4
Placement	24	0	0	2	8	0	7	7
Program design	15	0	0	0	0	1	5	9
Program development	21	2	1	0	0	0	6	12
Reporting to board	27	2	0	0	0	0	7	18

Table 20

NUMBER AND PERCENTAGES OF RESPONDENTS STATING THAT CONSENT WAS OBTAINED FROM PARENTS OR STUDENTS BEFORE COLLECTING, STORING, OR SHARING DATA (N=112)

QUESTION	School Respondents (n=87)		Central Office Respondents (n=25)		All Respondents (n=112
	# answering YES	% answering NO	# answering YES	% answering NO	% answering YES
Consent obtained prior to:					
collecting data?	60	69	15	60	67
storing data?	30	34	10	40	36
sharing data?	61	70	16	64	69

Table 21

PERCENTAGE OF RESPONDENTS REPORTING DIFFERENT METHODS OF OBTAINING CONSENT

	TYPE OF CONSENT			
TREATMENT OF DATA	Written	Oral	Both	No Answer
Collecting (n=75)	84	4	9	3
Storing (n=40)	70	12	12	5
Sharing (n=77)	82	4	10	4

Table 22

NUMBERS AND PERCENTAGES OF RESPONDENTS REPORTING WHETHER CONSENT WAS RETAINED

	School Respondents				Central Office Respondents				All Respondents			
TREATMENT OF DATA	n	% yes*	% no	% no answer	n	% yes*	% no	% no answer	n	% yes*	% no	% no answer
Collecting	60	82	7	12	15	100	0	0	75	85	5	9
Storing	30	87	7	7	10	90	10	0	40	88	8	5
Sharing	61	85	5	10	16	94	6	0	77	87	5	8

*The percentage representing "yes" answers included replies in which both "yes" and "no" were checked.

guidance counsellors and outside agencies. Many educators kept personal files and other files on students besides the OSR. It would appear that only principals and teachers were privy to personal files, while teachers, principals, secretaries, and nurses tended to have greater access to other files (tables 25 and 26).

Filing cabinets with the added protection of being located in either the principal's or the secretary's office tended to be the most frequently cited control measure for data from collection through to storage (table 27). This was true whether data were incorporated into the OSR or not. Destruction was not a frequently cited means of control, except when personal files were no longer needed. Accidental release of data tended to be limited by the use of release forms or by providing supervised access. When data were no longer needed, control was provided by placing data in locked cabinets with no access (table 28). However, responses such as "no procedure" or the "honour system" appeared cited relatively frequently: 23 percent during processing and 29 percent when data were requested by unauthorized persons (table 29).

Table 23

TYPES OF PERSON WITH ACCESS TO STUDENT DATA IN OSR FILES:

SCHOOL QUESTIONNAIRE

	TYPE OF ACCESS					
	Had Access Before Data Were Filed in OSR		Had Access Once Data Were Filed in OSR		Had Access After Data Were Used	
TYPE OF PERSON	n	%	n	%	n	%
Teacher	53	26	58	24	40	24
Principal	41	20	43	18	32	19
Secretary	37	18	38	16	24	15
Parents/students	14	7	25	11	17	10
Nurse	25	12	23	10	15	9
Guidance counsellor	9	4	12	5	8	5
Outside agency	3	1	4	2	4	2
Other	25	12	35	15	25	15
Total	207		238		165	

Table 24

TYPES OF PERSON WITH ACCESS TO STUDENT DATA IN OSR FILES:

CENTRAL OFFICE QUESTIONNAIRE

	TYPE OF ACCESS					
	Had Access Before Data Were Filed in OSR		Had Access Once Data Were Filed in OSR		Had Access After Data Were Used	
TYPE OF PERSON	n	%	n	%	n	%
Teacher	6	15	6	15	4	12
Principal	6	15	6	15	5	16
Secretary	8	20	10	24	7	22
Parents/students	2	5	1	2	2	6
Nurse	0	0	0	0	0	0
Guidance counsellor	2	5	2	5	1	3
Outside agency	0	0	0	0	0	0
Other	16	40	16	39	13	41
Total	40		41		32	

Table 25

TYPES OF PERSON WITH ACCESS TO STUDENT DATA IN PERSONAL FILES:

SCHOOL QUESTIONNAIRE

	TYPE OF ACCESS					
	Had Access Before Data Were Filed in Personal File		Had Access Once Data Were Filed in Personal File		Had Access After Data Were Used	
TYPE OF PERSON	n	%	n	%	n	%
Teacher	34	32	34	29	20	27
Principal	20	19	30	25	17	23
Secretary	7	7	6	5	3	4
Parents/students	9	9	14	12	5	7
Nurse	9	9	7	6	8	11
Guidance counsellor	4	4	3	3	1	1
Outside agency	0	0	0	0	0	0
Other	22	21	24	20	19	26
Total	105		118		73	

Table 26

TYPES OF PERSON WITH ACCESS TO STUDENT DATA IN OTHER FILES:

SCHOOL QUESTIONNAIRE

	TYPE OF ACCESS					
	Had Access Before Data Were Filed in Other Files		Had Access Once Data Were Filed in Other Files		Had Access After Data Were Used	
TYPE OF PERSON	n	%	n	%	n	%
Teacher	14	21	15	19	11	22
Principal	13	19	14	18	8	16
Secretary	11	16	13	16	10	20
Parents/students	5	7	6	8	4	8
Nurse	9	13	9	11	6	12
Guidance counsellor	2	3	2	3	1	2
Outside agency	1	1	2	3	1	2
Other	12	18	18	23	9	18
Total	67		79		50	

Table 27

HOW ACCESS TO OSR FILES WAS CONTROLLED:

SCHOOL QUESTIONNAIRES

TYPE OF CONTROL	TYPE OF ACCESS					
	Before Data Were Filed in OSR		Once Data Were Filed in OSR		After Data Were Used	
	n	%	n	%	n	%
Parental consent	3	5	2	3	2	4
Filing cabinet	10	17	28	37	12	21
Principal's office	9	16	13	17	10	18
Secretary's office	20	34	22	29	19	33
Destroyed	0	0	0	0	3	5
Central Office person	2	3	3	4	3	5
Other	14	24	7	9	8	14
Total	58		75		57	

Table 28

HOW ACCESS TO PERSONAL FILES WAS CONTROLLED:

SCHOOL QUESTIONNAIRES

	TYPE OF ACCESS					
	Before Data Were Filed in Personal File		Once Data Were Filed in Personal File		After Data Were Used	
TYPE OF CONTROL	n	%	n	%	n	%
Parental consent	0	0	1	2	0	0
Filing cabinet	14	31	15	32	9	19
Principal's office	8	18	10	21	6	13
Secretary's office	9	20	5	11	6	13
Destroyed	0	0	0	0	13	28
Central Office person	2	4	2	4	2	4
Other	12	27	14	30	10	21
Total	45		47		46	

Table 29

HOW ACCIDENTAL RELEASE OF DATA WAS PREVENTED:

SCHOOL QUESTIONNAIRE

	TIME							
	During the Collection of Data		When Data Were Being Filed, Updated, Processed		When Data Were Requested by Unauthorized Persons		When Reproduced Documents, Reports Were No Longer Needed	
TYPE OF CONTROL	n	%	n	%	n	%	n	%
No procedure/nil	8	18	10	23	6	11	3	6
Honour system	2	5	3	7	15	26	0	0
Release forms	21	48	17	39	11	19	3	6
Supervised access	13	30	13	30	24	42	2	4
Locked cabinet/no access	0	0	0	0	0	0	32	68
Other	0	0	1	2	1	2	7	15
Total	44		44		57		47	

D. Parent and Student Interviews

Tables 30-38 present the results of interviews with parents and students. In general, parents and students tended to find out about school records from school personnel and from general knowledge (table 30), but fewer than 50 percent reported that they had been approached for permission to collect, store, or share student information (table 31). The source of information on rights of access to the OSR was primarily school personnel (for students) or school personnel and general knowledge (for parents) (table 32).

Table 30: Parents' and Students' Reports of the Sources from Which They Learned that Student Records were Kept

SOURCE	MEAN % REPORTING SOURCE Parents Only	 Students Only	 Entire Sample
School personnel	23	55	39
Board personnel	1	0	1
Other parent/student	5	1	3
My child/parent	8	6	7
General knowledge (e.g., media)	41	9	25
Other	24	22	23

Parents and students believed that almost everyone had access to student records except the police and prospective employers, who were cited in fewer than ten percent of the responses (table 33). Table 34 indicates that parents and students found out from school personnel and from general knowledge who has access without written permission. Parents reported that they had applied for access to their child's record for their own general information or because of placement concerns, while students reported requesting access because of general interest or to complete applications for post-secondary education (table 35). It would seem that some parents and students learned of the possibility of removing information from OSR files from school personnel (table 36). Most, however, were unaware of that opportunity. Parents and students believed that the contents of the OSR consisted of report cards and marks,

Table 31: Percentages of Parents and Students who Reported that the School Board had Approached them for Permission for Various Requests

	MEAN % REPORTING		
REQUEST	Parent Only	Student Only	Entire Sample
To gather information about you/your child	42	21	32
To store information about you/your child	2	0	1
To share information with people in the school/board	17	6	12
To share information with people outside the board	25	11	18

although a few mentioned historical or medical data (table 37). When additional information which schools should keep was listed, the students wanted more to be included than did their parents (table 38). Both groups suggested that academic marks, medical histories, standardized tests, and records of personal characteristics were appropriate data for retention.

E. OSR Content Analysis

The actual OSR folder contains a number of sections which are completed for identification purposes, and as the child attains certain career goals. It is a requirement that some of these data be added to the folder from time to time, while some are optional either for the school principal or the parent/student.

Section A of the OSR folder consists of identification information, including name, sex, date of birth, verification of birthdate, the initial of the person recording the information, student/board/other number, and Student Identification Number. The first four are mandatory pieces of information, and while name, sex and birthdate are complete in about 99 percent of the cases, the means of verification of birthdate (69 percent) and the initial of the recording person (29 percent) were not as scrupulously maintained (table 39). The fathers' and mothers' names were likely to be recorded about 90 percent of the time, as is shown in table 40.

Table 32: Parents' and Students' Reports of the Sources from Which They Learned that They had Access to the OSR

	MEAN % REPORTING SOURCE		
SOURCE	Parents Only (15 groups)	Student Only (16 groups)	Entire Sample
School personnel	35	59	47
Board personnel	7	0	3
Other parent/student	0	2	1
My child/parent	2	2	2
General knowledge (e.g., media)	26	0	13
Other	22	17	19

Table 41 illustrates how complete the recording of students' school career data was in the OSR folder itself. The farther a student went on in school, the less likely it was that there would be a complete record of his or academic career, including the name of the school, entry data, completion date, and achievement forms. In fact, fewer than 40 percent of the records contained information on courses, credits, dates, and accumulated credits (table 42).

Inclusions within the OSR recording family data included names, home addresses, business addresses, and telephone numbers of fathers, mothers, or guardians, religious applications, number of siblings and even changes in family status and custody informations. There was little incidence of consent forms to collect, store, and update any of this information (table 43). With respect to health data, there were few health problems recorded and fewer statements on treatment or alerts and recommendations (table 44).

The amount of guidance data found in the OSR increased in high school, but it tended to be primarily of an academic nature, little vocational, and even less personal guidance information (table 45). There were very few consents to file or share such information.

At least one referral was found in about ten percent of the files. These tended to be referrals for special services or psychology. Nineteen percent were referrals to IPRCs and eight percent related to community or public health (table 46). Of these

Table 33: Parents' and Students Reports of the Types of Person They Believed May Have Access to the OSR Without Written Consent

TYPE OF PERSON	MEAN % REPORTING Parents Only	Students Only	Entire Sample
Principal	68	54	62
Classroom teacher	67	49	58
Guidance counsellors	53	46	50
Superintendents	47	35	41
School psychologists, etc.	53	27	41
Police	7	9	8
Social agencies	12	20	16
Universities	13	32	22
Prospective employers	3	16	10

referrals, fifty percent were made by the school principal, seventeen percent by the teacher, and ten percent by a resource teacher or specialist (table 47). The reported purposes of the referrals tended to be general assessment (42 percent), psychological assessment (25 percent) or special education placement (15 percent), with health, speech, and other reasons accounting for only about ten percent (table 48).

A great number of standardized test results were found in the OSRs, with an average of approximately two for each file. The major areas included reading, vocabulary/comprehension, multi-achievement, and intelligence testing (table 49). The majority of the assessment reports discovered in the OSR tended to be psychological in nature (table 50). There was little evidence of either attendance or social work data being included (table 51). However, there was a substantial indication that the OSR contained consents for placement or discussions of special education review teams (table 52).

The great bulk of data in the central office files consisted of psychological referral forms, assessment reports, raw standardized test data, and follow-up notes. There also seemed to be a higher percentage of files that contained consent forms for various assessment and intervention purposes (table 53).

Table 34: Parents' and Students' Reports of the Sources from Which They Learned Who May Have Access to the OSR Without Written Permission

	MEAN % REPORTING		
SOURCE	Parents Only	Students Only	Entire Sample
School personnel	21	16	19
Board personnel	0	0	0
Other parents/students	0	2	1
Child parents	0	9	4
General knowledge (e.g., media)	23	10	17
Other	22	8	8

VI. DISCUSSION AND CONCLUSION

The results of the field research have been summarized in the section above and are presented in more detail in Report No. 3-4. The discussion here will therefore not deal with each discrete data category, but will emphasize those general findings and combinations of results that appear to have the most important implications for student information management in Ontario, especially with regard to the implications for record-keeping practices deriving from "Bill 82."

This research has attempted to ascertain, through interviews and questionnaires of school and central office personnel, the informational, systemic, and legal-ethical characteristics of student information systems in Ontario. The primary research design included the collection of information data as they applied to a defined set of functions within schools and school boards for which student information is utilized. A large sample of OSRs were analysed to determine the range and extent of their documentation.

Those data handling sections of the OSR which are required to track a student by name, age, sex, and birthdate (section A), by schools attended with date and level of attainment (section B), by parents'/guardians' names (section D), together with those documents required to be held on file--the achievement form and French card--were all

Table 35: Parents' and Students' Reports of the Reasons for Which They Had Applied to See OSR Files

	MEAN % REPORTING REASON		
REASON	Parent Only	Student Only	Entire Sample
General information	28	20	24
Concern about placement	20	2	9
Obtaining transcripts	0	4	3
Obtaining transfer information	0	0	0
Obtaining information about job applications	0	0	0
Obtaining information for higher education applications	7	13	7
Other	8	14	8

maintained at about the 90 percent level. However, health information (section E), photos (section F), extra-curricular school activities (section G), additional information (section H), special achievements in school (section I), and follow-up information on school leavers (section K) are not well kept (less than 40 percent complete). Moreover, in those areas requiring a date to indicate the currency of an entry, the date was the current (within the last two years of data collection) only 20 percent of the time. Often, dates were not even noted.

Tests appeared to be used extensively, and they tended to be left in their entirety in the OSR file. This is particularly true in the case of files designated for special education students, especially multi-achievement or standardized achievement tests. On the average, there were two tests in every OSR. While the number of tests left in files (as opposed to merely a report with results) is in itself not a problem, the space they consume is, as is their lack of date.

The range of items contained in the OSR folders was substantial. Notes about absence and attendance problems, information sheets on occupations, family status, family problems, and tax assessment all appeared in the files. Very little of this information was dated and when dates were available to assess its currency, very little of the information was found to be current. No general procedures existed for the verification of this information; in fact, only 69 percent of the files indicated that the birthdate was verified. If the file is to be used as an active information device for the

Table 36: Parents' and Students' Reports of the Sources from Which They Learned that the Information May Be Removed from the OSR

SOURCE	MEAN % REPORTING Parents Only	Students Only	Entire Sample
School personnel	19	26	21
Board personnel	4	0	2
Other parents/students	0	3	1
Child/parents	4	0	2
General knowledge (e.g., media)	6	0	4
Other	22	5	16

Table 37: Types of Information Parents and Students Believed To Be in the OSR

TYPES OF INFORMATION	MEAN % REPORTING Parents Only	Students Only	Entire Sample
Family data/history	5	6	6
Medical information	7	8	7
Report cards, marks	22	24	23
Timetables	0	1	1
Attendance	2	5	4
Photographs	1	10	6
Special needs	1	1	1
Teachers' comments	1	4	2
Work experience	1	1	1
Supervision, discipline	2	6	4
Other	33	29	31
No responses	24	5	14

provision of appropriate educational services, accurate, current, and dated

Table 38: Parents' and Students' Suggestions of Additional Types of Information Schools Should Collect

TYPE OF INFORMATION	MEAN % REPORTING Parents Only	 Students Only	 Entire Sample
Academic marks	29	46	37
Family background	13	15	14
Medical history	29	42	36
Personal characteristics	12	36	24
Standardized test data	21	50	35
Individual psychological assessment	18	16	17
Early childhood background	18	13	16
Teacher observations	12	28	19
Anecdotal records	9	29	18

documentation must be kept in the file. Old, irrelevant, or useless documents must be purged and summaries of signal events rather than bulky stacks of irrelevant materials retained. Policies and procedures should be established which will produce pertinent, current, accurate, and complete information in student records.

The Ontario Student Record folders were generally kept in lockable filing cabinets in either the principal's or the secretary's office. However, there were no apparent procedures to limit access to data during collection, storage, or retrieval and there were no apparent procedures to handle the accidental release or destruction of data. Since the majority of OSR data was not held on computer files, little if any opportunity to recover data existed.

The acquisition of consent for the release of information seemed to be the only consent which was routinely (> 50%) acquired, but even this consent was not well maintained in document form. Many files in which letters were held concerning data sharing by outside agencies did not reveal a consent form on file. It was apparent that the greatest protection the OSR had was its lack of value as a source of important data. Few persons used the OSR as anything other than an historical file. When data were used to inform others, the person informed was usually the next year's teacher or another school-based person.

Table 39: Percentages of OSR Files Containing Different Types of Identification Information

TYPE OF INFORMATION	% of Files (Total: N=1150)
Sex	98
Date of birth	98
Verification of date of birth	69
Initial	29
Student/board/other number	7
Social Insurance Number	8

Parents and students tended to know that students' records were kept and that they had access to them; however, only twenty percent were aware of their rights with respect to the removal or correction of information, despite the fact that most administrators reported that they had informed parents/students of their rights with respect to the OSR.

While the OSR system appears to operate reasonably well for those purposes for which it was designed, it will not be able to fulfil the expanded role conferred by the passage of "Bill 82." The system is, in general, maintained as an historical record and acts as a data repository. However, it appears to suffer from a lack of policy, procedures, monitoring, and enforcement, particularly as these relate to the systemic, informational, and legal-ethical dimensions. An awareness of areas in need of development and the application of procedures to alleviate problems will serve to provide a firm basis for the incorporation of the new requirements for record-keeping deriving from "Bill 82."

Table 40: Percentages of OSR Files (Outside Section) Containing Different Types of Family Information

TYPE OF INFORMATION	% of Files (Total: N=1150)
Father	86
Father-deceased	3
Mother	89
Mother-deceased	2
Guardian	2
Guardian-deceased	0.3

Table 41: Percentages of OSR Files Containing Different Types of Information About Schools Attended

	TYPE OF SCHOOL			
TYPE OF INFORMATION	Primary (N=1045)	Junior (N=819)	Intermediate (N=626)	Secondary (N=470)
Name of school	91	97	98	71
Entry data	90	97	97	71
Completion date	87	91	86	48
Achievement forms	85	89	84	40
Signature	85	91	84	43

Table 42: Percentages of OSR Files Containing Different Types of Information About Progress in Secondary School

TYPE OF INFORMATION	% of Files (N=470)
Courses	38
Credits	38
Dates	38
Accumulated credits	16

Table 43: Percentage of OSR Files Containing Different Types of Family Information as Inclusions

TYPE OF INFORMATION	% of Files (N=1150)
Address of parent/guardian	49
Country of birth	24
Date of entry into Canada	8
Living with both parents?	15
(if not, with whom?)	7
Change of family status	2
Custody notation	3
Father's name	55
Father's place of employment	39
Father's business phone	47
Mother's name	55
Mother's place of employment	36
Mother's business phone	43
Guardian's name	17
Guardian's place of employment	12
Guardian's business phone	15
Number of siblings	22
Siblings' ages	20
Property ownership	14
Religion	27
Rent/tax support (if Roman Catholic)	11
Consent to file family information	0.2

Table 40: Percentages of OSR Files (Outside Section) Containing Different Types of Family Information

TYPE OF INFORMATION	% of Files (Total: N=1150)
Father	86
Father-deceased	3
Mother	89
Mother-deceased	2
Guardian	2
Guardian-deceased	0.3

Table 41: Percentages of OSR Files Containing Different Types of Information About Schools Attended

	TYPE OF SCHOOL			
TYPE OF INFORMATION	Primary (N=1045)	Junior (N=819)	Intermediate (N=626)	Secondary (N=470)
Name of school	91	97	98	71
Entry data	90	97	97	71
Completion date	87	91	86	48
Achievement forms	85	89	84	40
Signature	85	91	84	43

Table 42: Percentages of OSR Files Containing Different Types of Information About Progress in Secondary School

TYPE OF INFORMATION	% of Files (N=470)
Courses	38
Credits	38
Dates	38
Accumulated credits	16

Table 43: Percentage of OSR Files Containing Different Types of Family Information as Inclusions

TYPE OF INFORMATION	% of Files (N=1150)
Address of parent/guardian	49
Country of birth	24
Date of entry into Canada	8
Living with both parents?	15
(if not, with whom?)	7
Change of family status	2
Custody notation	3
Father's name	55
Father's place of employment	39
Father's business phone	47
Mother's name	55
Mother's place of employment	36
Mother's business phone	43
Guardian's name	17
Guardian's place of employment	12
Guardian's business phone	15
Number of siblings	22
Siblings' ages	20
Property ownership	14
Religion	27
Rent/tax support (if Roman Catholic)	11
Consent to file family information	0.2

Table 44: Percentages of OSR Files Containing Types of Health Data

TYPES OF INFORMATION	% of Files (N=1150)
Medical conditions	14
Treatments	3
Recommendations	2
Alerts	1
References	8
Follow-ups	1
Consents to file above in OSR	1
Other	6

Table 45: Percentages of Files Containing Different Types of Guidance Notations

	% OF FILES	
TYPES OF INFORMATION	All Grades (N=9150)	Grades 9-13 (N=470)
Personal	5	9
Academic/course-related	19	41
Vocational/career	8	18
Consents to file in OSR	1	0
Consents to share information	1	1

Table 46: Percentages of Referrals made to Different Types of People

TYPE OF PERSON	% of Referrals (N=157)
Special services/psychology	51
Community/public health	8
Social work	3
Attendance counsellor	4
In-school review committee	4
IPRC	19
Other	11

Table 47: Relative Frequencies of Different Types of Assessments and Standardized Tests

TYPE OF PERSON	% of Referrals (N=157)
Regular teacher	17
Resource/specialist	10
School/principal	50
Parent	1
Psychological services	1
Other	4
Not stated	20

Table 48: Percentages of All Files Containing Different Types of Assessment Report

PURPOSE	% of Referrals (N=157)
Psychological assessment	25
Health-related	3
Speech/language	7
Special education placement	15
General assessment	42
Other	8
Not stated	1

Table 49: Percentages of Central Office Files Containing Various Types of Attendance/Social Work Information

TYPE OF ASSESSMENT OR TEST	% of All Assessments and Tests (N=2305)
Intelligence (IQ)	21
General developmental/ability	2
Reading vocabulary/comprehension	32
Language	1
Mathematics	6
Motor/perceptual	2
Personality/behavioural	1
Multi-achievement	32
Vocational	2

Table 50: Percentages of Central Office Files Containing Various Types of Special Education Information

TYPE OF REPORT	% OF ALL FILES Present	Dated	Consent Present
Psychological	12	11	3
Reading	1	1	0.1
Speech and language	4	4	1
Auditory and visual	2	2	0.2
Early identification	5	1	0.3

Table 51: Percentages of Central Office Files Containing Various Types of Psychological Information

TYPES OF INFORMATION	% of Files (N=383)
Referral form	1
Consent for OSR access	0.3
Assessment report	2
Follow-up notes	2
Early school-leaving application	0
Early school-leaving report	0
Consent for exchange of information	0.3
Consent for release of information	0
Report/correspondence with agencies	1
Suspension letters to parents	1
Other	5

Table 52: Percentages of Central Office Files Containing Various Types of Special Education Information

TYPES OF INFORMATION	% of Files (N=383)
Consent for placement/demission	31
S.E.R.T. follow-up notes	24
Speech teachers' reports	5
Consent for exchange of information	3
Consent for release of information	3
Report/correspondence with agencies	9
Early ID program profile	11

Table 53: Percentages of Central Office Files Containing Various Types of Psychological Information

TYPE OF INFORMATION	% of Files (N=383)
Referral form	41
Assessment report	56
Follow-up notes	29
Consent for exchange of information	7
Consent for release of information	12
Report/correspondence with agencies	15
Consent for OSR access	1
Consent for psychological assessment	23
Standardized test raw scores	33
Other	11

CHAPTER SEVEN:
CURRENT NEEDS OF STUDENT INFORMATION SYSTEMS IN ONTARIO

I. INTRODUCTION

A. Origins

Report No. 6 presented a detailed statement of the current needs of Ontario student information systems. The report compared the proposed model SIS developed in Report No. 5 with current Ontario practice, as described in Reports No. 2 and 3-4.

The generic information model developed in Report No. 1 provides the conceptual framework of this chapter. It incorporates the legal-ethical considerations of chapters 4 and 5 and aspects of what the research team consider to be "good practice," gleaned from their knowledge of student information systems in Ontario, from preliminary discussions with a wide range of educational personnel, and from analyses of appropriate literature. Further information on current practices in school boards has been collected through a questionnaire survey of, and interviews with, educational personnel, and from a review of ministry and board policy statements.

As the model, its sources and assumptions, and the SIS have been discussed in previous chapters, they will be referred to in this chapter in the briefest of terms, and primarily to facilitate easy reference.

B. The Model

A model was applied to existing Ontario practices in order to identify needs and not to pinpoint flaws. Weaknesses can always be found if the model applied contains elements not themselves contained in the system under examination, and if the assumptions of the model-builders differ from those underlying the system. Both conditions obtained in the enquiry, and so weaknesses or inadequacies, according to the terms of the model and its assumptions, were bound to be identified. The elements of the model and the assumptions underlying it are summarized below.

C. Summary of Assumptions

Two themes dominate the position taken by the research team on information use and users at all levels of the educational system. Firstly, all information about children, including those considered exceptional, should be accommodated within a single unified information system. Information used in making decisions about individuals and groups of children should be part of the student record within that system, and only information contained in the record should be employed in all decisions. Secondly, information in the record is primarily for the use of teachers in maintaining and improving the quality of classroom instruction, and in making decisions about children. All other uses should accommodate that function.

II. IDENTIFIED NEEDS

A. A Student Information System

Since the inception of the Ontario Student Record in 1950, the student information system of which it is the core has become more complex and sophisticated as it has responded to societal and educational changes. As a result, the system's current structure and mode of function reflect, in different degrees of explicitness, assumptions, convictions, adaptations, and responses from many sources and periods. This structure has been under increasing pressure from several quarters in the last decade. The major legislative changes made in 1973 concerning the legal-ethical aspect of the OSR and its use and maintenance are still being worked out in practice. The recent amendment to the Act ("Bill 82"), in mandating early identification of the learning needs of all students and the provision of appropriate services to children with special needs, involvés significantly more record-keeping of a more precise sort than has been previously required. From another angle, but with probably more far-reaching implications and certainly more obvious impact to date, comes the thrust towards an information society with its attendant technology.

Legislative enactment and guidelines at the ministry and board levels have not kept pace with the pressure of change. The characteristics of student information are barely dealt with in ministry regulations, and boards, while specifying to a very limited extent the processes employed in managing information, do not provide adequate guidelines for those procedures. The guidance given to boards and teachers on information handling varies widely. Perhaps the most obvious gap in ministry and board documentation is in the definition of terms. It seems to be taken for granted that educational personnel share a common, and a reasonable understanding of what constitutes, for example, a student record or a parent who has access or pertinent information. Perhaps procedural statements and guidelines are meant to specify the characteristics of student information and its use, but there are too many aspects not dealt with in official documents. The developments in information use and technology necessitate a more precise formulation of the elements of student information in procedural statements and guidelines.

It is clear that a restatement of the structure, organization, and procedures of student information systems in Ontario is necessary. The restatement should define the structural elements, the network, and the informational, systemic, and legal-ethical attributes. Whatever form the description of systemic aspects takes, however, it should derive from, and be formally related to, a statement of the purposes of the student information system. Many functions are of course served by that system, but what is now required is the explicit declaration that the primary function of student information, to which all other functions are subordinate, is to assist teachers in the instruction of students. Information should be collected and used primarily in relation to that end. The role of teachers should be clarified to stress their instructional and decision-making functions.

Another position that should be formally emphasized is related to this view of teaching and the role of information, namely, that all information used in making decisions about children, including classroom instructional decisions, should be kept in student records. Information not located there should be formally excluded from decision-making.

B. Structural Elements

The research survey makes it clear that information about students tends to be kept in a wide variety of files, both in the formal OSR and associated files and in a variety of personal files, at school and board levels. While it is understandable that the many different people in a school system who interact directly with a child should have readily accessible information, the proliferation of files renders security impossible and the maintenance of privacy very difficult. Furthermore, the scattering of student data among the files of individual practitioners, while the central OSR lacks copies or even lacks references to other files, reduces efficiency in record-keeping, organization, and decision-making, and subverts the intent of a single Ontario Student Record.

It became obvious as the research study progressed, especially in interviews with board and school personnel, that decisions about children's programs and placements were commonly made on the basis of information that was not recorded at all, or was recorded only in private files. The formal student record, i.e., the OSR, was often treated as a token, a cluster of files which technically had to be kept up-to-date but which was unimportant, and a chore. The OSRs were not files used in routine day-to-day decisions: storage bins rather than working files. They were felt to contain a great deal of information irrelevant for school or classroom purposes and generally lacked the information that would be useful for instruction. It was not simply that student files were not typically used as working files, but rather that, lacking the necessary data, they were not capable of being so used.

The student record envisaged by the research team was developed and refined through the early stages of the study. It was constructed to express two primary convictions. Firstly, all information about a child, on which instruction and decisions are based, should be contained in a single, unified, exclusive system of interconnected files. Authorized personnel should have access to all files (apart from the professionals' notes) on a need-to-know basis and all files should be indexed. Secondly, the files should primarily contain action-oriented information gathered, recorded, updated, and removed according to its relevance to a child's instructional and program needs. They should be seen and used as working files, with information in usable or easily translatable form for instructional purposes. The bulk of information would therefore have to do with the choice of individual programs, the rationale for program plans, statements of the implementation of the plans, assessments of the degree of their success, and proposed amendments.

These two emphases at first glance impose yet another burden on already hard-pressed teachers, in the form of paperwork. But what is suggested, to meet demands for greater accountability and ever-higher teaching standards (which teachers generally support) is a systematic approach to much that has in the past been done unsystematically. The systematic recording of program plans, and their rationales, outcomes, and amendments provides teachers on the one hand, and parents, consultants, and principals on the other, with a permanent reference to past work and thinking, along with guidelines to future planning. There is no doubt that teachers are not accustomed to using a unified set of files in this fashion, although it is standard practice in fields as different as medicine and insurance. Nothing of a teacher's spontaneity or capacity to react to children as they change need be lost; these are in fact likely to be enhanced, as the recording of decisions, plans, and changes tends to clarify one's reasons for action and may make teachers more aware of the range of teaching options. While greater use of files may be involved, that use is not simply mechanical, but active and directly related to day-to-day work.

The student record should contain all information relating directly to a student's instruction which has been collected and/or maintained by a school board or its authorized representatives. That information should be combined in an indexed system, comprising seven elements.

The Office Index Card: This readily accessible record, whether in card, electronic, or printout format, is the school source of identification, tracking and placement data. It should include information: identifying the student, parent(s) and emergency contacts; describing the student's past and present school placements; describing the disposition of the school records upon transfer, graduation, or retirement; indicating the presence of health alerts and information essential for the staff to know, e.g., custody orders.

The Student Record Folder (OSR): This folder is the official record of student progress, and should provide: information identifying the child and his or her parents; information on the student's entry, educational placement, and progress; graduation information; and a record of special achievements. As the record is essentially permanent, only verified information that is necessary and in the long-term interest of the child should be retained in the folder.

OSR Inclusions: The OSR Folder should continue to hold information not specifically designated for retention in other files, such as records of tests, events, activities, and programs. It should contain, among other things, current data bearing on the child's instruction, especially program plans and records of their rationales, results, and amendments. The student transcripts should be retained in the folder along with a log of access.

The School Health Card: This card will inform school personnel of significant health problems and their implications for the student's safety, and should be updated at least annually by means of a parental questionnaire. Information should include the physician's name and phone number and sufficient details of the health condition, along with appropriate first aid or crisis procedures.

The Attendance File: The documentation of attendance will comprise the major portion of this file, but in the case of children with attendance problems, records of situational factors and the actions taken to deal with these problems will also be included.

The Documentation File: This file is created to house all documents prepared primarily to meet legal requirements or to report legal decisions, e.g., court or custody orders and recorded decisions of IPRCs. The general criterion for placing a document in this file is that it has been, or may be, used for legal purposes, and not for current day-to-day purposes such as program decision-making. Indices identifying and locating information contained in files outside the OSR Folder should be kept in this file to control access to the information. Guidelines on access to, and use of, the contents of the documentation file, should be provided for educational personnel.

Professionals' Notes: The contents of this file are those materials held by a professional for his or her own use, and identifiable with a particular child. When these materials have a bearing on a student's educational program or are the basis of judgments about the child, they must be entered in the educational record. Once placed in the professionals' notes file, they should be available only to the student or his or her parents at the professional's discretion. Professionals' notes should be indexed in the documentation file.

C. The Network

The effective use of information demands a network of connections between decision-makers and the sources and recipients of decision-making, within the same level, or between the levels of the educational system. The locations where information is kept, the points of access, the connecting channels, and the media of storage are all aspects of the information network. Because it has developed in a somewhat piecemeal fashion in Ontario, this network now requires clarification in order to serve the students as envisaged in this report. While it is not necessary to design a uniform network for all school boards in Ontario, it is necessary for each board to make explicit the locations, access points, connections, media of storage, sources and dispositions of information, and levels of functioning that it employs. Local circumstances, requirements, and resources will dictate the needs of the system to an important extent, but a general framework for the organization of the network is provided in table 2. In essence, the system must deliver the necessary information, at the appropriate time, and in a format appropriate for the use of the decision-maker. Detailed illustrations of information input and output, by source, destination, and type, are given in appendix A of Report No. 5.

It must be emphasized that the network is an important aspect of the student information system. It operates in keeping with the stated purpose of the whole system, which is to improve the quality of instruction for the student by assisting the teacher in the process of decision-making. The choice of medium of storage, access points, delivery format, etc., for a given type of information must thus be dictated by what the system's users find most helpful rather than by what technology makes most available. There is an ever-present danger of "fixing" the network in terms of what is simple, available or traditional and thereby reducing the effectiveness of the system in meeting the real needs of the student.

D. Information

The authors believe that the primary purpose of the student information system is to improve the quality of instruction for the student by assisting the teacher in the process of decision-making. The student record should comprise an up-to-date record of a child's career and the major decisions taken about his or her schooling. Both objectives require that the information to be collected and used in decision-making should be clearly identified and specified. Guidance should be provided by the Ministry of Education to assist individual boards in deciding what is or is not essential information. Information appropriate in one child's case need not be so in another, but information types can nevertheless be usefully categorized under headings related to specific categories of educational decision, in keeping with the individual requirements of schools and boards.

The research survey indicated that provincial and board documentation paid much less attention to the quality of information or to types of information in student records than to the processes of information and handling and the legal-ethical requirements. Further, the analysis of file samples and interviews with education personnel revealed that relevant information often was not collected, not verified, or was incomplete, even in mandated categories. Thus, only 69 percent of file samples contained evidence of verification of date of birth; achievement forms were incomplete or missing in fifteen percent of primary and sixteen percent of intermediate OSRs; and information about progress in secondary school was missing in sixty-two percent of the files. Again, interviewees routinely reported that OSRs contained much information that was out-of-date and irrelevant to instruction and too little that was relevant.

In the light of these findings, the emphasis on the basic attributes of information that should characterize any information system seems particularly relevant to student information. Accuracy, completeness, pertinence, and timeliness should be defined and illustrated in ministry regulations and guidelines and in board policies and operating procedures. The guidance provided should be clear and detailed but should acknowledge that the ultimate choice and responsibility rests with individual educational personnel who must decide whether an item of information is accurate, complete, pertinent, or timely. Monitoring processes at all levels of the educational system from board to classroom need to be specified; regular as well as incidental review of files is required to keep them useful and usable, to fill gaps in information, and to provide up-to-date information, on which to base instruction and decisions.

Accuracy is always hard to determine, let alone guarantee, but verification measures should be strongly emphasized and insisted upon. No exhaustive list can be compiled to fit all cases, but the principles to be followed can be stated in legislation and policy statements, and numerous illustrations can be given in provincial guidelines and board operating procedures. Interviewees sometimes seemed to equate being accurate with being objective or factual, but this in fact is not necessarily the case. Whereas, dates of birth, grades, placements, and IPRC decisions can be considered factual, most information about a student appropriate to assisting instruction is likely to consist of the judgements, choices and observations of teachers and others. No judgement can be objective, nor does subjectivity require an apology, but the subjective judgement should be well-informed. The reader of a file has a right to know why an opinion was formed or a decision taken, and the rationales and data sources of judgements should therefore be recorded wherever possible. Guidance should be provided in this area.

Similarly, it is difficult to specify what constitutes completeness of information in any given situation. While simple factual data, such as dates and names of courses, can be specific in advance. The case is different for information on a child's learning, achievements, or behaviour or on the program planned for a student. Reliance on the principle of reasonable thoroughness is not sufficient, as it will be interpreted differently by different educational personnel. Instead, principles should be defined in guidelines, with multiple examples.

Information can be judged pertinent and timely only in relation to the purposes and functions for which it is to be used. Hence, only general criteria for evaluating pertinence can be offered by the ministry and board, but many examples can be provided in order to guide the practitioners.

In order to attain reasonable standards of accuracy, completeness, pertinence, and timeliness in any information system, a high degree of vigilance is required. Thus, provincial and board guidelines should specify, and boards and schools should monitor, two types of review. Firstly, all users of information need to be encouraged to review files as they use them, checking for and noting areas where information is lacking or doubtful or out-of-date. Secondly, formal reviews need to be routinely scheduled for the same purpose. In both cases, deficiencies should be noted and the resolution of problems encountered in the review should be made the responsibility of the principal of the school, with the support and guidance of a designated official at board level. Review procedures need to be promoted through the development of effective programs of in-service training for all staff working with student records.

The importance attached in this chapter to the quality of information gathered, retained, and used is closely related to the purpose of information stated above, namely, to assist in the instruction of, and decisions about, children. Much of the current skepticism about the utility of the student record, and the strong tendency to make judgements for children on the basis of information not contained in that record, stem from a concern about high quality information rather than a cavalier attitude towards it. A clear statement of the purpose of the projected student record system should make the attributes of completeness, accuracy, pertinence, and timeliness easier to maintain. Detailed guidance on all these attributes and on data categories should be provided, particularly through the use of illustrations in materials and in in-service workshops (akin to the use of case studies in clinical teaching).

Recommendation 63: that the Ministry of Education define in legislation the rights and obligations of students, parents, and personnel with respect to ensuring the completeness, accuracy, pertinence, and timeliness of student information.

Recommendation 64: that the Ministry of Education provide detailed guidelines for the interpretation and implementation of processes relevant to the attributes noted in Recommendation 63.

Recommendation 65: that school boards define in policy the rights and obligations of students, parents and personnel with respect to ensuring completeness, accuracy, pertinence, and timeliness of student information.

Recommendation 66: that school boards establish operating procedures to ensure completeness, accuracy, pertinence, and timeliness of student information.

E. Processing of Information

Analysis of provincial and board policy documentation, questionnaires, interviews, suggests that the processes involved in handling educational information are largely taken for granted by educational personnel in Ontario. The rationales for each type of process, the relationships between the processes, and between processes and characteristics of information, are virtually ignored in educational documents. Even the collection of information, by far the most frequent subject of legislation and guidelines on information handling, is discussed in terms of types, format, and sources rather than of its processes. Retrieving, updating, and storing information are barely touched on.

The major need of the student information system is for an explicit formulation at provincial and board levels of the interrelated processes which comprise information handling. Definitions of each process and its purpose, and of relationships between processes are required; detailed statements on all processes should be made, including suggestions of when each is required and how each can be carried out. Those responsible for the collection of information should be specified, at least by category, together with procedures such as the mode of collection, e.g., forms, interviews, tests, etc. While the needs of different schools, areas, levels, and personnel are likely to involve a wide variety of collection processes, the storing of information should be much less varied, since a uniform system would simplify the situation for the ministry and the board. The mode, location, and contents of the information should be indexed, and points and conditions of access clearly stated.

In the proposed SIS, the process of updating information will require much greater attention. Given the primary purpose of information--to help teachers to improve instruction and to make decisions--student records must constantly reflect the student's recent progress or difficulties, and all pertinent information must be entered into the record. Similarly, the retrieval of information is conceived of as a more selective process, with a particular problem in mind, than currently seems to be the case. The process of transmitting or disseminating information will have to be clarified. The conditions under which it should occur, the means to be used, and the persons involved and/or responsible should in particular be specified.

Recommendation 67: that the Ministry of Education define in legislation the rights and obligations of students, parents, and personnel with respect to the functions of collecting, storing, updating, retrieving, and transmitting student information.

Recommendation 68: that school boards define in policy the rights and obligations of students, parents, and personnel with respect to the functions of collecting, storing, updating, retrieving, and transmitting student information.

Recommendation 69: that school boards establish operation procedures to ensure the effective collection, storage, updating, retrieval and transmission of student data.

As in the case of the quality of information, the care and skill with which information is collected, updated, retrieved, stored, and transmitted can be improved with the help of detailed guidance using the "case study" approach and in-service work at provincial and board levels. Within schools and boards, both incididental review (as records are used), and regular review at specified times need to be instituted to check that the requisite processes have been adequately carried out. The need to record and date any use of a file should be emphasized. All discrepancies should be noted and brought to the attention of the appropriate person.

F. Legal-Ethical Considerations

While the student information system seemed in general to function in keeping with current legal and ethical requirements, two weaknesses were uncovered by our research. Firstly, while educational personnel accepted and welcomed parents' increasing involvement in the educational system, they did not seem to pursue an active role in informing parents of their rights and responsibilities. Secondly, schools and boards displayed a somewhat casual attitude to issues of consent, access, security, and informing. One-third of school respondents to the research questionnaire reported inadequate security arrangements, and consent was often not obtained from parents before data were collected or shared.

The proposed development of the SIS requires a systematic consolidation of legal and ethical considerations at ministry and board levels. Consent, access, security, and informing should be defined, guidelines and operating procedures for their application developed, and the legal implications of each function made clear. Procedures must also be developed for acquiring informed consent; where parents or students have not been informed they must be apprised of their rights and the implications of giving consent. At board and school levels, clear specifications must be provided of who does and does not have access to what information, in what file, for what purpose, on what conditions, and in what circumstances. Much greater stringency than currently exists is advocated in regulations, policies, and operating procedures regarding security provisions, their application, and their monitoring. Regulations at present, fail to define the responsibilities that personnel in the boards and schools have to provide adequate security for student information. Such definition is necessary. Board policies and procedures are required to prevent or limit loss, damage, or misplacement of information, to recover information after loss, and to prevent disclosure to unauthorized persons, through physical protection, reconstruction, and general monitoring.

To be meaningful, consent and rights of access must involve an informed client group. Parents and students must therefore be made aware of their rights, of the existence and contents of files, and of the uses to which information may be put. Legislation and guidelines on the informing of parents of their rights and of the means of exercising them are thus required.

Recommendation 70: that the Ministry of Education define in legislation the rights and responsibilities of students, parents, and personnel with respect to the legal-ethical considerations of consent, access, security, and being informed.

Recommendation 71: that the Ministry of Education provide detailed guidelines to the interpretation and implementation procedures with respect to the legal-ethical considerations of consent, access, security, and being informed.

Recommendation 72: that school boards define in policy the rights and obligations of students, parents and personnel related to consent, access, security, and being informed.

Recommendation 73: that school boards establish operating procedures to ensure that rights and obligations of consent, access, security, and being informed be honoured.

As with all other aspects of the proposed student information system, monitoring must occur to ensure that the correct procedures are being carried out at board and school levels. Here, too, the "case study" approach and in-service work can provide detailed guidance.

G. Development of the Proposed SIS

The authors suggest two major interrelated thrusts in the development of the projected Student Information System. First, they advocate the improvement and systematization of the existing system so that it can provide information to teachers for instruction and decision-making. Secondly, they propose guidance and training in the principles, purposes and operating procedures of the developed system for all educational personnel. Planning for changes in a province-wide system is on a scale that requires the resources and authority of the Ministry of Education, which should therefore adopt an active leadership role, especially in the following areas:

Recommendation 74: that the Ministry of Education establish in-service training and workshops for senior board personnel and their delegates, to inform them of the principles, rationales, purpose, nature, constituent elements, and development of the revised Student Information System.

Recommendation 75: that the Ministry of Education undertake discussion with faculties of education with a view to the introduction of components dealing with the principles and practices of the revised Student Information System into the pre-service education of teachers.

Recommendation 76: that school boards establish in-service training and workshops for administrative and teaching staffs to inform them of the principles, rationales, purpose, nature, constituent elements, and development of the revised Student Information System.

Proposals are required for the consolidation of old and the enactment of new legislation, regulations, and guidelines. The ministry should require boards to develop their own policies and procedures on all aspects of the student record. It should monitor the implementation of the desired changes through a small unit headed by a senior officer, who would be responsible also for the in-service education of board officials. A similar role would be filled in each school board by a senior official designated as responsible for the implementation and ongoing monitoring of information services, for liaison with the Ministry of Education, and for in-service training at the school level.

Recommendation 77: that the Ministry of Education monitor the implementation of the revised Student Information System by its own officials and by school boards.

Recommendation 78: that school boards monitor all aspects of the implementation of the revised Student Information System by their own administrative and teaching staffs.

III. POSTSCRIPT

The needs identified by the research team and the means of meeting them suggested in Report No. 6 have been briefly outlined in this chapter. The developments suggested are systematic, thorough, and comprehensive but not radical, and the existing student information system is largely incorporated into the projected system. The emphasis on relating information and its handling to a teacher-focused purpose is novel only in its explicitness. The authors do not wish to add further administrative work to the teacher's load: rather, they agree that all information should, by being useful and usable, persuade teachers to make more systematic use of it and to develop a more sophisticated awareness of its potential.

CHAPTER EIGHT:
A MODEL STUDENT INFORMATION SYSTEM

I. INTRODUCTION

A model student information system is described in three sections in this chapter. The first section describes the elements that compose the system and gives, where appropriate, definitions of the data types proposed for each element. The second describes the location and storage medium of the data and, where necessary, the equipment proposed for their storage, processing, and exchange. The third proposes a series of policies and procedures that should be enacted by provincial or local governing authorities to ensure that data will be protected from abuse and yet be available for correct use. Each of these sections describes aspects integral to the complete student information system.

A number of terms and concepts used throughout this section require explanation in order to provide a common basis of understanding.

1. Student data are to be retained in a unified management system called the Student Information System (SIS).
2. Definition of the system is in terms of the use that is made of data rather than the persons who control the data, in order to embrace all school system information regardless of which professional group has collected it.
3. Data are part of, and thus controlled by, the SIS if they are derived from or identifiable with a specific student and if they bear on, or are employed in, the determination of educational programs for the student.
4. Information that does not have direct import for the provision of educational services, and that is regulated by legislation and codes of ethics governing non-teaching professions, is not included within the SIS.

II. THE ELEMENTS OF THE STUDENT INFORMATION SYSTEM (SIS)

A. Overview

The SIS proposed herein is composed of seven elements:

1. The Office Index Card (OSOR): a record identifying the name, address, parents, and emergency contacts for the student, and also recording the transfer or retirement of the student and the tracking of his or her record;
2. The Ontario Student Record Folder (OSR): a file folder, permanently recording the student's academic and relevant social history and within which inclusions are retained;

3. The OSR Inclusions: records of tests, events, assessments, activities, achievements, programs, and other data of import to the education of the student;

4. The School Health Card: notification of a student's significant health problems, the appropriate emergency first aid treatment, and the name and phone number of a physician to contact in an emergency;

5. The Attendance File: a register of attendance and absence from school, the reasons for any attendance problem judged to be serious, and the information necessary to support actions taken to ensure proper attendance;

6. The Documentation File: a compilation of legally significant records, such as consents, suspension and expulsion orders and appeals, child custody and court orders, and board notifications, decisions, and processes;

7. Professionals' Notes: files, notes and protocols held by professionals, that bear on, or are used for, decisions on a student's educational program.

B. Office Index Card

The office index card acts as a readily available source of identification, placement, tracking, and emergency data for administrative purposes. The index may be stored on paper, microfilm, or electronic media, and is held permanently in the school office (or in storage). It tracks record transfers to other schools, and records the student's retirement or graduation.

The proposed contents of the index card include: (i) the name, address, phone number, gender, and birthdate of the student along with the names, addresses, and phone numbers at home and work of the parents or guardians, and the person to be contacted in case of emergency; (ii) the placement of the student in the school including the grade, room, teacher's name, and dates of entry and exit from the school and class; (iii) the disposition of the record including the name, address, board, and province to which the record is transferred, and the date of arrival at, or transfer from, the school; (iv) a health alert (if such is warranted) to indicate that a critical health condition is noted on the school health card and the name, address, and phone number of the family physician; and (v) other information that is essential for office staff to know, e.g., custodial orders, access restraints, transportation details, or what language is spoken in the home.

While the office index card may contain other information, it is advisable to restrict information on this document because of the obvious difficulty in controlling access.

C. The Ontario Student Record Folder (OSR)

The student record folder has two major purposes. Firstly, it acts as the permanent official record of elementary and secondary school education, as well as the transcript of secondary school achievement, and secondly, it acts as a container for numerous documents that record various types of information about the student.

The data permanently recorded on the folder should be severely restricted, as the folder is the official student record and is retained for a period of seventy years by the student's last school. Positive achievements rather than failures should be emphasized, in keeping with the positive nature of the present OSR.

The proposed OSR folder should record identification data, including the student's name, school system identification number, sex, and verified birthdate. The folder also should record: (i) parent or guardian identification data; (ii) special achievements; (iii) the schools attended with board name, grade placement, achievement form number (one number per year), date of admittance, date of demittance, name of teachers or school official; (iv) secondary school progress with the course names, codes, levels, credit values, years, grades, and dates of completion; and (v) a running total of the credits attained toward secondary school graduation, an indication of whether all compulsory and any additional requirements have been met, and the date of graduation or retirement from secondary school.

The format of the transcript should be designed to prevent forgeries when printed by computer and photocopied. A single-page transcript with the necessary identification and grades on one face is most suitable for present needs and facilitates computer processing and photocopying. There should be a place on the page for the signature and printed name and position of the official who certifies that the record is accurate and current up to the date noted on the last line of text.

The permanent nature of the student record and the general acceptance of the present OSR, suggest that there is some value in continuing the present OSR paper format. The computerization of grade reporting in many schools, however, makes the written recording of marks on the present folder inappropriate. The A/C form (as it is sometimes called), a computer-printed single page, or the new Ontario Student Transcript referred to in the response to the Secondary Education Review Project entitled The Renewal of Secondary Education in Ontario (Nov. 1982, p. 17) may be more suited to the requirements of most secondary schools today.

A new record format compatible with the new transcript should replace the older A/C form. New requirements for graduation i.e., the Ontario Secondary School Diploma, should be incorporated in a modestly redesigned OSR folder which would delete extraneous written text. In order to avoid the serious disruption of present records, a substantial transition period will be required, as will amendments to regulations governing the present A/C form, which will require its retention on the new transcript in the folder after the student's graduation from secondary school.

D. Inclusions in the OSR Folder

The OSR folder serves as the repository of all student information, i.e., data and documents not specifically designated for retention in other elements of the system. Such a repository should contain a wide range of data such as records of tests, events, assessments, activities, achievements, and programs. Some materials, such as assessment protocols, will be technical and will require interpretation for the lay person, but most should be written in non-technical language. Information should be retained in the record only if it is conducive to the improvement of the pupil's instruction. Inclusions, usually paper inserts in the record folder, should be dated and indexed. Such practice is commonplace in the retention of text in computer files, now becoming feasible for school uses.

E. School Health Card

A child who has a serious medical problem may be placed at risk if personnel in the school lack knowledge of the problem and how to deal with an emergency. The public health nurse who is assigned to the school, usually on a part-time basis, may be able to cope with a problem if the student's condition has been identified and recorded and he or she has the skill to deal with it. Often, however, no public health nurse is present when such a problem arises, and public health records are not accessible to school personnel. In that case, there might be no one in the school aware of the problem or of the emergency procedures necessary to provide first aid to the child.

The proposed school health card would be a record of significant health problems with potentially serious implications for the safety of the student and/or for the program in which he or she is enrolled. The card should be retained within the OSR folder, be indexed on the OSOR, and be used to inform school personnel of: (i) health conditions that may create crisis situations in the normal course of events, e.g., allergic reactions to insect stings; (ii) health conditions which must be taken into account in the development of program activities for the student, e.g., heart conditions which require adjustments to an otherwise normal program; (iii) emergency first aid procedures that must be administered at the school, by school personnel, should a crisis develop; and (iv) the name and emergency telephone number of the student's physician.

The addition of an immunization record was discussed. Immunization or its omission, however, is neither significant to program design nor likely to create a school emergency. It is thus left to be recorded in the public health nurse's files.

At present, school personnel may be aware of some serious conditions from which students suffer. Parents may specifically tell the school principal or teacher of an illness, or the public health nurse (with some conflict between professional ethics and legislated employment and supervisory requirements) may confide in the school principal. Since lack of adequate knowledge creates a substantial risk for the child and an intolerable situation for the nurse and teacher, a questionnaire should be completed by the parent each year which will state unequivocally the presence or absence of any known health condition. The information collected should be recorded on the health card.

Since the purpose of the card is to inform school personnel of serious conditions that would need to be treated with dispatch, the health record must be easily identified by, and easily accessible to, school personnel who have direct contact with pupils.

F. Attendance File

The attendance file is retained in a school to record the presence or absence of a student and to record the reasons for, or the conditions giving rise to, poor attendance. These records are necessary because grants are provided on the basis of average daily enrollment, and the legal enforcement of compulsory attendance requires documentation of the conditions giving rise to, and the actions taken to correct poor attendance. Since many of these data are highly personal and private, records must be accorded the same level of protection as that provided in present OSR-related legislation.

Efficient attendance procedures in schools, particularly large secondary schools, require current data and frequent reports of attendance for school office and classroom personnel. The attendance file includes data recording daily attendance at school, attendance at individual classes, reasons for absence, conditions leading to attendance problems, actions prescribed to correct absenteeism, and other pertinent data. Paper records are cumbersome and may not be the most effective way of recording this information. Computerization of the files may be necessary to reduce the amount of time that school office personnel spend on maintaining attendance records.

As a separate element within the SIS, the attendance file should be safeguarded in the same way as other elements containing personal data are protected, and at the same time should employ effective procedures for the retrieval of data required to monitor attendance.

G. The Documentation File

The documentation file acts as a repository of all original documents or copies of documents that have been prepared primarily to meet legal requirements or to report legal decisions. Such documents would include, for example, child custody or access court orders, written evidence of consent to conduct individual psychological, psychometric, or specialized educational assessments, minutes and records of IPRC hearings, and notices of placement and appeals.

Legal documentation is not needed to make decisions about a child's program but is primarily used to illustrate that specific persons have been involved, particular processes have been carried out, required decisions made, or certain consents obtained. Thus, these documents may and probably should be retained apart from other documents, reports, and data that are used in the day-to-day educational decision-making process.

Reports such as those of specialists who have conducted assessments of a child's learning ability normally would not be retained in the documentation file as they are prepared primarily to meet educational needs. Such assessments of the child must be available for ready reference as long as they are relevant to educational decision-making. It may be necessary for legal protection, however, to retain for an extended period some reports that are no longer required in educational decision-making. Such reports, if they are to be retained, should be kept in the documentation file, rather than in the working OSR where they may influence decision-making. The interests of both the student/parent and of the board require that legally significant documents be retained and be available should questions be raised about decisions made about students or the processes required to make them.

Where such processes are mandated by legislation, it is important that each required step be carried out and appropriately documented. Assistance should be provided to educators, who, not trained in the law, are unfamiliar with legal documentation. Principals of schools should be helped by the inclusion, in the documentation file, of a checklist specifying the steps to be carried out during the processes mandated by statutes or regulations, and the documents that each of these steps require. The principal would be assured of a complete record of the process if all the required documents on the checklist were collected.

The document file should be restricted to use in meetings involving legal issues only. The file should not be available for casual perusal, although access should be permitted to those who have access to other elements of the SIS. Controls must be exercised over the updating, amendment, or purging of data in this file. Such data and documents constitute the legal basis for actions and for defence against actions brought on behalf of the pupil, and as such they must be available to both parents and the board on a fair and equitable basis.

H. Professionals' Notes

Professional notes consist of protocols, test instruments, comments, anecdotes, and other records privately held by a professional for his or her own professional use and which can be identified with an individual student. They are privileged for the use of the professional in consultation with the student/parent and to assist in the execution of profesional duties, and are not available to any other person without the consent of the parent/student and then only when the professional believes such access to be advisable.

Two kinds of data may be held by a professional who is providing services to a student. The first category consists of data that do not bear on the education or educational program of the student. Such data are not appropriate for inclusion in the SIS. They are not included in the SIS files and thus are controlled only by the constraints placed on the professional group, e.g., The Health Disciplines Act, The Hospitals Act, The Psychologists Registration Act, or by each profession's code of ethics.

The second kind of data bears on the educational program of the student, and is used by the professional in arriving at judgments concerning the student and his or her program of instruction. These data are included in the SIS. They are included in the professionals' notes element of the SIS only if the professional believes it to be in the best interests of the student to retain such professional information apart from other data in the SIS. However, where these data are employed in specific decisions related to the program of the student, they should be transferred from the professional notes element into another element.

As an element of the SIS, professionals' notes should be controlled by all stipulations of the Act and its regulations, except as noted below. The professional maintaining such notes should be required to index them in the OSR folder, and to protect their integrity as other elements of the SIS should be protected. Only the access provisions should differ.

Professionals' notes should be retained by any professional governed by mandate of legislation or by codes of ethics that maintain the privacy and confidentiality of student information. All other should be prohibited from maintaining a separate file of notes.

III. THE NETWORK

A description of the system by which student data should be retained, prepared for use, used, and recalled must begin with an account, however brief, of the system's purposes and their relation to its design. It must then define the way in which the design accommodates these purposes, in this case by describing the ways in which the media available should be exploited, and the relationships between the various parts of the system. Finally, the discussion will define the ways in which specific types of information should be dealt with to provide the necesssary protection for the privacy of the system's clients. The authors have attempted to describe the system simply and directly, and to place it within a context that is familiar to all those in close contact with the network.

A. The Purposes of the Network

The purposes of the student record have been fully discussed in chapter 4, and are noted here solely to remind the reader of the importance of tying them to the design of the actual information system. Essentially, the purposes may be classified into three groups: historical, operational, and metasystemic.

1. Historical use of the record includes the provision of evidence of academic attainment, age, attendance at school, and of other such necessary but non-current data, to former students who have graduated from secondary school, when their record is obviously no longer functional for elementary or secondary school decision-making.

2. Operational use includes all the ongoing day-to-day decision-making processes that are required by the student, parent, teacher, and other operational personnel who have direct contact with the student, especially when deciding on any action that must be taken to assist the student to successfully complete elementary and secondary school.

3. Metasystemic uses provide the infrastructure essential and/or desirable to the life and studies of the student. These should include statistical analysis, comparative data preparation, planning studies, and similar

activities. It should be noted that most management activities at one level of recursion are operational at a higher level, and the system should therefore recognize and prepare data bases that are equally applicable at all levels of the system.

B. The Characteristics Needed to Achieve the Purposes

Historical Uses

By their very definition, historical uses of student records exclude use of the data while the student is attending a school in the province. While data are no longer required to be updated, an historical record must be accurate, complete, and pertinent when the student leaves the school for work, advanced study, or a school outside Ontario. By its nature, the historical record is static, encompassing data collected at an earlier time but still needed on occasion over an extended period, without alteration. A historical record requires the following features:

1. Specific time frames for the retention of certain types of data should be defined, with specified processes for the removal and destruction of data no long appropriate to keep;
2. Accurate, pertinent, and complete data, particularly those retained over considerable periods of time are required, with safeguards to prevent alteration;
3. Media of storage must permit the economical retention of records over substantial periods of time, while maintaining the privacy and security of the data;
4. Retrieval systems must permit easy retrieval and the reproduction of a specific record upon a subject's request.

Operational Uses

Records required for operational purposes are frequently in use and must be readily available to decision-makers. The student's file should be a dynamic record, added to as every process is undertaken and every decision made, and frequently altered as new data replace and old and unnecessary or out-of-date data are removed. To be dynamic, the record requires a number of features in addition to those outlined in chapter 4:

1. Information must be easily and readily retrievable by decision-makers at a number of levels of the system, e.g., student, teacher, school, and board levels;
2. Processes for storage and retrieval of information must not be overly complicated or time-consuming, nor require elaborate skill on the part of either sources or users;
3. Data controls must permit differential access to different categories of users, while assuring the security of data;
4. Decision-makers must be able to obtain the right data at the right time and in an appropriate format;

5. Data must be in a form to allow analysis of performance over time and individual and aggregate statistical comparisons;

6. Data must be available in a form that is appropriate for their use, e.g., legally relevant data must be available in a form that is legally acceptable;

7. Data input should occur once for any specific unit of data, which should then be available for all appropriate uses.

Metasystemic Uses

Metasystemic decision-making at one level of recursion frequently feeds into operational decision-making at a higher level. Even so, whereas operational decisions are often based on raw data, i.e., the particular characteristics of a specific student, metasystemic decisions employ comparisons of individuals with group characteristics, statistical analysis, and aggregations of individual data. These call for different data characteristics, formats, and retrieval, and the record system must develop greater analytic capabilities. The lack of such a capability on the part of the present OSR system is clearly related to the present failure to use the OSR for metasystemic decisions. The potentially greater and more effective use of student records for such purposes would require the development of the following features:

1. Data needed for metasystemic decisions should be retained in a machine readable format;

2. Data should be amenable to statistical analysis, collected over time, and have definitional bases appropriate for analysis;

3. Processing equipment should be of sufficient size and sophistication to permit the protection and analysis of the contained/stored data;

4. Processes should be available to allow analysis to be carried out without the need for sophisticated computational or computer skills;

5. Programming and data storage should permit the linkage of various files of one individual and statistical comparisons of an individual record with aggregated data based on all records.

C. The Medium of Storage

Three types of media--(i) paper; (ii) microfilm; and (iii) electronic--are presently employed in student information systems in Ontario. It is the authors' view that no single medium is appropriate to meet all the present and future requirements of the students, teachers, schools, school boards, and province. Thus, we recommend a combination of media for the retention of student information. Each school board will, of course, choose a system that meets its needs, and a variety of systems will thus be developed across the province.

Paper

The traditional medium for the storage of student information in Ontario has been the paper record, consisting of cards, folders, envelopes, and inserts. This method of storage has been effective for traditional uses, although there are significant problems with the present OSR format. The magnitude of the storage problem will increase, especially as a result of new legislation, as the volume of retained information increases. It is evident, however, that paper is and will be the most useful medium for certain types of data, especially legal documentation, until other media are accepted by people generally and by the courts.

Paper has several advantages as a storage medium. Paper documents can be stored as they are: this avoids errors in transcription, the cost of transformations, and time delays in recording and verifying data. The document is simply produced, and a copy inserted in the file; no new skills are required. While access to such a record is easy, access to large numbers of records is time-consuming, thereby offering some protection against unauthorized uses of the data. A record on paper is widely accepted and is easily certified by a dated signature. If paper records are well designed, it is difficult to amend them without detection.

At the same time, paper records have a number of disadvantages. The storage of paper carries the substantial risk of fire and water damage, and paper-based data are difficult (in terms of cost and space) to protect over long periods of time in secure locations. The space needed and the cost of storage for seventy years of student files in a large school system is enormous. Because they are easy to use, individual records can be difficult to protect against unauthorized access. They are easily reproducible with present technology and the only protection that can be provided is physical isolation of the record, which is not feasible with working records such as those still in use in schools. Because paper records contain so many disparate data elements, correction, updating, or amendment may be very expensive and may require the replacement of whole sets of data with the attendant risk of error. Thus the maintenance of paper records in keeping with the criteria outlined in chapter 2 is expensive and is frequently avoided. Paper as a medium militates against the aggregation and statistical analysis of data: it is impractical for machine reading, and collecting data for analysis from paper files in more labourious ways makes costs excessive. Thus there are a number of impediments to the use of the paper record as the sole storage medium for student records.

Microfilm

The retention of the OSR folder and office index card on paper creates substantial storage problems. Microfilm, while not used widely, has been employed for the long-term retention of permanent student files.

Several board personnel commented in the course of our investigations on the need for a less bulky means of retaining OSR folders. Clearly, microfilm, from which paper documents may be prepared, is one solution. While the storage of microfilm is economical and suitable for the long term, it is doubtful that microfilm would have any other uses in a student information system.

Electronic

Electronic record-keeping will undoubtedly become a primary means of storing data in the future. Developments in computer technology and programming make this medium the most promising for future information management systems, whether the data are numerical or textual. At this time, these developments are not sophisticated enough to permit the electronic maintenance of all records for use in classrooms, schools, and board offices. There are, however, strong reasons for the introduction of computer technology into the student information system.

Electronic records have several significant advantages, particularly when numerical records are involved. The ease of storage, retrieval, processing, and analysis is, without doubt, the major advantage of the electronic medium. As well, the possibility of single-entry multiple files creates substantial time savings at data entry and permits the checking of processes to ensure the high quality of data, i.e., that they are verified and accurate. Certainly such processes can be carried out (but frequently are not) with paper records, but the time and personnel costs are high. These checks are essential and can be treated as routine with electronic data storage; with single data entry, checks do not need to be repeated. Each new datum is checked and is added to the file, thereby correcting or updating old entries. Control over data in the file is possible since data movement may be logged to record not only access, but also electronic transfers which are carried out within the system. Lastly, electronic numerical data may be manipulated inexpensively to carry out statistical analysis, rearrangements of presentation or format, report preparation, and other tasks which at present must be performed by individuals working with less efficient tools.

However, electronic data maintenance does require expertise which is expensive, in short supply and frequently unavailable at the school level. This creates a need for program development at the school and board level to ensure that "user-friendly" programs are available to technologically unsophisticated users. Such programming may reduce the apprehension of school users who have little or no computer training. With the appropriate programming, the analysis of data at the school level will be possible.

One further drawback of computerized records is the ease with which access to large numbers of records can be gained once codes for entry have been circumvented. This requires that security measures be incorporated into the design of the system, and that secure locations and other safeguards be maintained for tapes, etc., so that electronically based systems may be at least as secure as more traditional ones. The costs of electronic storage are generally lower once the data are entered, but costs of initial and subsequent data entry tend to be high, as is the initial outlay for hardware and programming. While the costs of setting up the system are considerably higher than that of traditional methods, they must be viewed in the context of the more extensive and long-range cost-effective uses that can be made of the data that have been entered.

D. The Model SIS

The authors have proposed a student information system which combines all three media according to the specific needs of the schools and school boards adopting the system. In keeping with the assumptions set out at the beginning of this project, the system must be functional at the student/teacher level, applicable to the information needs of the school, and useful for information development and planning at the school board level. This brief description of the model will include discussion of the specific and general uses of data, the elements of the student information system, and the implications of the use of the three media.

At the present time, the student record is not very useful for decisions which require numerical manipulation such as projections, aggregations of data, or statistical analysis. Its use, even in individual decision-making, must rely on the personal assessments of the reader rather than on any data-based judgments that require school-wide, board-wide or provincial comparisons or statistical analysis. We believe this to be a major weakness of the present OSR system. To correct this weakness and to meet the challenge of more efficient and effective data management, the authors have proposed a mixed system of paper and electronic files that will allow school and board personnel to develop data-based decision-making skills. This objective is particularly appropriate because of the requirements arising from "Bill 82."

It is essential to recognize the concerns expressed by those whose valued skills are essential to the proper functioning of our schools, but who do not possess the skills necessary for electronic data processing. As a result, the proposed system attempts a transition from the present OSR paper format to a combined paper/electronic record system which can be used by classroom teachers and other professionals who may or may not have a sophisticated knowledge of the computer.

An integration of paper and electronic media

Seven files have been proposed for retention at the school level. Five of these files are already in existence, three of which--the office index card, OSR, and OSR inclusions--are within the OSR system. We propose the incorporation of the attendance file, at present outside the OSR system, and the inclusion of professionals' notes, which are at present retained (though frequently without public acknowledgement) by an overwhelming majority of personnel. Two new elements, the health card and the documentation file, have been proposed. All seven files, with the exception of the documentation file and the professionals' notes, must be readily available to personnel at the school level.

The model combines electronic and paper records at the school level, with each school board deciding the relative importance of each medium in its system and the equipment considered appropriate for its schools. The present paper OSR, supplemented by additional elements, should normally be located in locked file cabinets in secure school locations. Electronic records should be retained on the disks of a computer located in the school connected, either by dedicated or dial-up lines, to the central board computer. In this way, the direct feed of aggregated data from the school to the board would be feasible.

The computer in the school should be of sufficient capacity for the on-line processing of all the school's information management needs, and with sufficient memory to maintain students' records along with the necessary programs available for processing. Each school computer should be equipped with the keyboard input and monitors required by the school, and with a quality printing facility for the production of letters, reports, and documents for operational and metasystemic needs. Programming should be designed to permit effective use of the facility by unsophisticated users. Differential security codes should protect against unauthorized entry to the data files and should permit data entry and amendment only on the command of authorized personnel.

We propose that files employed at the school level be critically examined prior to their inclusion in either a paper or electronic format to determine the most effective storage medium. Electronic data processing is particularly useful for numerical and codified data, while the reports of various professionals, such as those of psychologists and social workers, are not easily computerized. While it does not seem advantageous to attempt the computerization of textual data at this time, machine readable data, such as test results employing computerized scoring, could profitably be computerized.

Long-term retention

Student records of historical value may be treated separately from other records because of their static nature and this extensive period of retention. Because data are retained for substantial periods, and may, if used inappropriately, damage the prospects of a student, only factual data (e.g., dates of entry to the school and of academic attainment) should be kept. We propose that the present method of purging the records should continue, with most inclusions being destroyed after one year, and all but the office index card and the permanent OSR folder being destroyed after three years. We also propose that the OSR folder be redesigned to retain only sections A, B, D, F, I, and J of the current folder and include a student transcript having secondary school credits and a dated certification of the last entry. No other identifiable data should be retained except, perhaps, where employed in strictly regulated longitudinal research projects that will assist boards in identifying and meeting the educational needs of their pupils. The record of secondary school attainment should be designed on a single face to make its reproduction (in transcript form) feasible, and forgery by addition, deletion, or alteration difficult. Any medium of retention should permit the reproduction of the transcript, which should be stored so as to permit its retrieval on request by name and date of graduation or school attended. A student's records should be located for three years in the last school attended, until the inclusions are purged, at which point the permanent record should be moved to central board office facilities for permanent storage. Storage might employ microfiche, the original paper OSR folder, or a computerized record.

Files with specialized uses

The attendance file, insofar as it is employed for school purposes, would appear to be appropriate for computerization. The ease of recording absences, the efficiency of the attendance reports produced for subject and homeroom teachers, vice-principals, principals, and secretaries, and the ability of the computer to maintain, manipulate, reclassify, and aggregate data make attendance a prime target for computer application at the school level. Serious attendance problems, handled by the attendance counsellor at the central board or regional office, would need paper records, but these uses will be discussed later. It will simply be noted here that the school would find attendance recording much less onerous with electronic methods.

The documentation file would, as previously mentioned, be unsuitable for computerization although it may be possible to codify some of the procedures to allow computer retention of certain data, such as tracking logs. The legal requirements that give rise to this file suggest the need for original documents in many cases; indeed, the documentation file was originally proposed for this reason. Electronic data storage is unlikely to be more than minimally useful for this element of the SIS.

Professionals' notes are controlled by the individual professionals and should be retained in the medium of their choice. The use of computerized files, however, seems to be highly unlikely. The information system's major concern with regard to professionals' notes is to ensure their security.

All other elements of the SIS, as is illustrated in table 2, would employ both paper and electronic formats. The medium of storage should be matched to the characteristics of the data and their use to develop the most useful combination.

Central board uses

Student information originating at the school level is used to produce both board and Ministry of Education reports. The network developed to handle student information should facilitate the preparation and transmission of aggregated data for the Ministry. These aggregated data do not identify the individual student and do not invade privacy. Where the local board employs the Queen's Park Bank to obtain services, such as the Student Guidance Information System (SGIS) or the university application services, the student is identified and the disposition of data should therefore be controlled.

Three situations call for student data to be available at the central board office. Firstly, central board bodies such as the IPRC need to make decisions on students requiring specialized services. These committees require and generate substantial information on students, ranging from test scores or records of academic achievement to personal data on health conditions or family characteristics. Secondly, certain projects, such as a system wide testing program, generate data that require central processing but that are returned to individual student files. Processing may involve cross-system analysis, statistical norming, or other statistical processes requiring system-wide data and the computing capability of larger central board office computing facilities. Thirdly, data required for financial accounting, attendance reporting, and other administrative uses can only be developed through the centralized aggregation of individual student data. Such data normally carry no individual identification. All these uses require central board facilities for data handling.

Student data used for statistical or administrative purposes are generally amenable to computerization. It is proposed that, to meet these administrative needs, data should be retrieved from the school-based data file for the central board file on a call-up basis. While an argument might be made for the central location of all data, working files will be more useful to practitioners and files maintained by school personnel will be more effective if data are in the school and available to school decision-makers. While control over access is possibly more difficult to maintain in the school, the advantages of increased accessibility outweigh the concern for security, if the school is provided with sufficient resources to institute adequate security measures. We have therefore proposed the development of control and operating programs to be carried out at the central board level. In this way the student will be assured of the safeguards to privacy required by central board office policy, and of standard operating procedures across the school system.

The documentation file: A special case

The argument for the central board storage of paper files is, however, powerful in one context. In cases where easy access should be discouraged, it may be better to locate files in a situation with inconvenient access. Such a condition could apply to the documentation file. In this case, documents are placed in the file to be available for appeals, reviews, litigation, or for similarly infrequent events. Access should be monitored (but not prevented), because the probability of the loss or destruction of documents increases with increased use of the file.

The retention of the file in a central office location may be justified if, and only if, the student/parent is made aware of its existence and has reasonable, though possibly inconvenient, access. While such inconvenience might discourage a teacher from examining the file, it should also discourage the perusal of the documents by those who have no legitimate need to know the information they contain. On the other hand, while the access of teachers to the documentation files of a minority of students would be lessened, that of the central office personnel, who will have greater need for the documentation, would be extended and simplified. Even so, in the interest of retaining files at the school level, we propose that the documentation file be kept at the school, and that it be carried to the central board office when the student has his or her case referred for consideration by an IPRC beyond the school level.

In conclusion, the proposed network establishes a seven-element student information system which is located in the school, uses both paper and electronic media, and is available to school personnel. It recognizes the present level of skills of the school-based decision-maker by calling for the development of "user-friendly" programs for computer application, permitting in-school use of the data stored on electronic media. The system should permit: the classroom teacher to derive or contribute information appropriate to student or teacher decisions; the school administrator to derive or contribute data necessary to make plans for and operate the school; the authorized central board professional or administrator to request information on individual students and groups of students; and the provincial Ministry to obtain, by request to the board, statistical data that are presently unavailable or cumbersome to obtain. The system will at the same time protect the vital interests of student privacy by instituting security provisions to regulate file entry.

Our model does not deal with student information employed by community colleges, universities, or the Ontario University Application Centre (OUAC). Applications to Ontario universities are co-ordinated by the OUAC, and are accompanied by a student's written consent authorizing the school or board to forward academic records and identification data to the universities selected by the student. This and other processes for application to higher education are regarded as beyond the scope of this report.

Data that are employed by the Ontario Ministry of Education are normally in aggregate form and do not identify individual students. Even though the original data relating to individuals are central to our concerns, anonymous data derived therefrom fall outside the scope of this report and outside our model system.

IV. GOVERNANCE OF THE SIS

Ideally, student information is managed and controlled by professional codes, administrative practicies, and governmental legislation. Firstly, various professions, in particular the teaching profession, are governed by codes of ethics to guide its members in their dealings with students and student information. Secondly, school administrators and supervisory personnel administer school board policies and operating procedures, and provide support and guidance to assist their staff in the management of student data. Thirdly, provincial governments establish the legal framework for effective information practice by enacting legislation and regulations. The section below considers the question of the controls established by the provincial government and by school boards. Professional codes and school procedures will be commented on only briefly.

In addition to their legal obligations with respect to student information under the Act, teachers are governed by their adherence to codes of ethics. It is beyond the scope of this report, however, to address the ethical practices of, and self-monitoring by, various professions. Here it will simply be acknowledged that effective ethical codes and professional standards are regarded as critical to the success of any system.

The section below examines control mechanisms at the provincial and local levels. A set of requirements for legislation is listed, followed by a set of related requirements for regulations. These, in turn, are followed by a set of requirements for local school board policies and operating procedures. This report does not consider school policy separately from local school board policy.

A. Provincial Legislation

Recommendation 79: that legislation be enacted to define the following:

1. Definition and purpose of the SIS
    - the purpose of the Student Information System (SIS);
    - the primary uses of the SIS;
    - when an SIS shall be initiated for a student;
    - the school system's SIS as the sole record of identified student data;
    - personnel responsible for SIS management in the school board;
    - personnel responsible for SIS management in the school;
    - terms that are relevant to control of the SIS:
        - student or pupil;
        - parent;
        - guardian;
        - professional;
        - student information.

2. Consent
    - direct consent;
    - representational consent;
    - when direct consent is required;
    - who may give direct consent;
    - who may give representational consent;
    - when representational consent is permissible;
    - requirements for consent to conduct research based on student information;
    - requirements to provide data for ministry purposes;
    - requirements to provide data for board purposes;
    - requirements to provide data required for the fulfillment of the principal's duties;
    - requirements to provide data for the fulfillment of the duties of the attendance counsellor.

3. Access
    - access;
    - rights of student to access;
    - rights of parent to access;
    - persons who may grant access to a student's record;
    - right to copy data from the record;

- right to interpretation of record entries;
- rights of access of teachers and principal of the pupil;
- rights of access of other teachers, supervisory officers, and professionals working with the pupil;
- conditions for access to student data by any other person;
- conditions for gaining access for the purpose of conducting research;
- obligation of all persons with access to maintain secrecy;
- protections for subjects against contents being used as evidence;
- protections for donors from actions arising from record contents;
- protections to prevent being required to give evidence about the record;
- protections to prevent a record being admissible in a legal proceeding;
- requirement to log entry by any non-school person gaining access to a file;
- requirement to log non-school data dissemination from student record;
- requirement to log, in the OSOR, record transfers to new schools.

4. Security
   - obligations of all board personnel to ensure the security of all student records.

5. Informing
   - obligation of the board to inform students/parents of the SIS, including:
     - purpose;
     - structure;
     - types of information retained in the elements of the SIS;
     - rights regarding access, consent, correction of errors, etc.

6. Accuracy
   - obligation of the board to ensure the accuracy of data in the SIS;
   - right of the parent/student to request the correction of inaccurate data;
   - right of parent/student to appeal a refusal to correct data in the SIS.

7. Completeness
   - obligation of a board to ensure the completeness of data in the SIS;
   - right of parent/student to request the addition of data to the SIS;
   - right of parent/student to appeal a refusal to add data to the SIS.

8. Pertinence
   - obligation of a board to ensure the pertinence of data in the SIS;
   - right of parent/student to request the removal of non-pertinent SIS data;
   - right of parent/student to appeal a refusal to remove non-pertinent data.

9. Timeliness
   - obligation of the board to ensure the timeliness data in the SIS;
   - right of parent/student to request the removal of out-of-date SIS data;
   - right of parent/student to appeal a refusal to remove out-of-date data.

B. Provincial Regulations

Recommendation 80: that regulations be produced which clarify the following:

1. Description of the SIS
   - information to be considered as student information in the SIS;

- media which may be employed for the SIS;
- an index to be kept in the SIS for locating student data retained outside the OSR Folder;
- information that is required to be retained in the index;
- the required location of the index;
- obligation to initiate an SIS for a student upon first registration;
- obligation to destroy all data not kept as defined in the regulations;
- elements of the Student Information System (SIS);
  - OFFICE INDEX CARD (OSOR)
    - purpose
    - data required to be retained in file
    - data permitted to be retained in file
    - format of the record
    - medium for its retention
    - period of its retention
  - ONTARIO STUDENT RECORD FOLDER (OSR)
    - purpose
    - data required to be retained in file
    - data permitted to be retained in file
    - format of the record
    - medium for its retention
    - period of its retention
  - OSR INCLUSIONS
    - purpose
    - data required to be retained in file
    - format of the record
    - medium for its retention
    - period of its retention
  - HEALTH CARD
    - purpose
    - data required to be retained in file
    - format of the record
    - medium for its retention
    - period of its retention
  - ATTENDANCE FILE
    - purpose
    - data required to be retained in file
    - format of the record
    - medium for its retention
    - period of its retention
  - DOCUMENTATION FILE
    - purpose
    - data required to be retained in file
    - format of the record
    - medium for its retention
    - period of its retention
  - PROFESSIONALS' NOTES
    - purpose
    - characteristics of data considered to be student data in the SIS
    - data which may be retained in a file
    - format of the record
    - medium for its retention
    - period of its retention.

2. Consent
   - conditions necessary for a valid direct consent;
   - conditions necessary for a valid representational consent:

    - by the legislature;
  - by the school board.

3. Access
   - conditions that apply to obtaining a copy of data in the SIS;
   - conditions that govern access to the SIS by students/parents;
   - conditions under which the record may be transferred to a new school:
     - under the jurisdiction of the same school board;
     - under the jurisdiction of another school board in Ontario;
     - under the jurisdiction of a school board outside Ontario;
     - which is a private school inspected by the Ontario Ministry of Education;
     - which is an uninspected private school;
   - information to be recorded in the OSOR on transfer of a record;
   - obligation of the board to ensure that staff maintain SIS secrecy;
   - requirement to maintain a log of the dissemination of data from the SIS.

4. Security
   - obligation of the board to ensure secure locations for all records;
   - obligation of the board to ensure secure equipment for all record files;
   - obligation of the board to ensure computer security procedures and codes for all data.

5. Informing
   - obligation of the board to inform students/parents of SIS procedures;
   - obligation of the board to inform students/parents of the index.

6. Accuracy
   - obligation of the board to institute verification procedures for the SIS.

7. Completeness
   - obligation of the board to ensure that all data categories required by legislation or regulations be included in the SIS.

8. Pertinence
   - obligation of the board to periodically review the pertinence of SIS data.

9. Timeliness
   - requirement to date all data in the SIS;
   - requirement to conduct periodic reviews of all data in the SIS.

C. School Board Policies

Recommendation 81: that policies be enacted by school boards concerning the following:

1. Description of the SIS
   - the purpose of the Student Information System (SIS);
   - the elements of the SIS:
     - OFFICE INDEX CARD (OSOR)
       - purpose
       - characteristics
       - storage location
     - ONTARIO STUDENT RECORD FOLDER (OSR)
       - purpose
       - characteristics

        - storage location
    - OSR INCLUSIONS
        - purpose
        - characteristics
        - storage location
    - HEALTH CARD
        - purpose
        - characteristics
        - storage location
    - ATTENDANCE FILE
        - purpose
        - characteristics
        - storage location
    - DOCUMENTATION FILE
        - purpose
        - characteristics
        - storage location
    - PROFESSIONALS' NOTES
        - purpose
        - characteristics
        - storage location;
- appointment of a supervisory officer to be responsible for the administration of the board SIS;
- recognition of the principal as the official responsible for the SIS in the school;
- data that are required by the board to be kept in or excluded from the SIS;
- the standardized forms to be employed in collecting student data;
- the transition points at which standard data are to be collected.

2. Consent
    - requirement to obtain consents prior to collection of student data;
    - the form in which a consent should be obtained;
    - information that shall be given prior to obtaining a consent.

3. Access
    - the process to be used in requesting access to SIS data for research;
    - the officer to whom proposals for research should be addressed;
    - approvals and consents required to employ student data in research;
    - persons who have a right to access to the data retained in the SIS;
    - the official to whom a person must apply to request access to the SIS;
    - obligation of officials to identify persons who request access to the SIS;
    - requirement for a log of access to SIS data by non-school persons;
    - conditions that govern access to SIS data by non-school persons;
    - right of the parent/student to obtain a copy of data in the SIS;
    - conditions that apply to costs of copying data in the SIS;
    - obligation of official to transfer records as required by regulations.

4. Security
    - obligation of the principal to ensure security of records in the school;
    - requirement that the principal obtain an oath of secrecy from school staff working with the SIS;
    - requirement that the supervisory officer responsible for the SIS obtain an oath of secrecy from central board office staff working with the SIS;
    - appropriate locations for data files that are elements of the SIS;
    - appropriate methods for destroying data that are removed from the SIS.

5. Informing
   - means used by schools to inform parents/students of the purpose, contents, and processes of the SIS;
   - specific procedures for informing parents/students regarding the SIS:
     - annual information session at registration;
     - notification printed on all achievement forms or report cards;
     - information session prior to consent request;
     - information session prior to hearing in an IPRC;
   - data that are required to be retained on all students;
   - obligation of the principal to inform parents/students of the SIS;
   - periods when the principal should attempt to inform parents/students;
   - obligation of the principal to advise of the right and process of appeal.

6. Accuracy
   - obligation of the principal to ensure the accuracy of data in the SIS;
   - processes for requesting correction or removal of inaccurate data.

7. Completeness
   - obligation of the principal to ensure the completeness of data in the SIS;
   - right of parent/student to request the addition of data to the SIS.

8. Pertinence
   - obligation of the principal to ensure the pertinence of data in the SIS;
   - right of parent/student to request the removal of non-pertinent data from the SIS.

9. Timeliness
   - obligation of the principal to ensure the timeliness of data in the SIS;
   - requirement to date information added to the SIS;
   - right of parent/student to request the removal of out-of-date data from the SIS.

D. School Board Operating Procedures

Recommendation 82: that operating procedures be developed by school boards concerning the following:

1. Description of the SIS
   - elements in the SIS;
     - OFFICE INDEX CARD (OSOR)
       - format of the card with a list of the data required to be retained
       - medium for its retention
       - location in the school
       - security provisions
       - disposition on student's withdrawal or graduation
     - ONTARIO STUDENT RECORD FOLDER (OSR)
       - format of the record folder with data required to be provided
       - medium for its retention:
         - while pupil is in school
         - after pupil withdraws or graduates
       - location of folder in the school while pupil is enrolled
       - required security provisions
       - disposition of folder when pupil withdraws or graduates
       - period of folder retention beyond withdrawal or graduation
     - OSR INCLUSIONS
       - data required to be retained in folder
       - data that may (and may not) be kept in the folder

    - periodic procedures for examining and purging
    - requirement to date all data placed in the folder
    - procedures to save legally or historically significant documents
    - period of data retention after the pupil withdraws or graduates
    - disposition of the data after they are removed from the folder
  - HEALTH CARD
    - data required to be retained in the file
    - method of flagging significant health problems relevant to educational provision on the OSOR
    - procedures for collecting the data
    - format of the card
    - location in the school
    - period of its retention
    - disposition of the card upon the pupil retiring or graduating
  - ATTENDANCE FILE
    - data required to be retained in file
    - format of the record
    - location of:
      - the register
      - the attendance counsellor's file
    - medium for its retention
    - period of its retention
  - DOCUMENTATION FILE
    - documents that are appropriate for retention in the file
    - procedure for purging important historical or legal data from the OSR
    - format of the record
    - medium for its retention
    - location of the file
    - period of its retention
  - PROFESSIONALS' NOTES
    - characteristics of data considered to be student data in the SIS
    - data which may be retained in the notes
    - security required for data held in professionals' files
    - location of the notes
    - medium of retention of the notes
    - period of retention of the notes
    - definition of a professional within the context of the school board jurisdiction
- the official in the school to whom all inquiries should be made;
- the official in the central board office to whom inquiries should be made;
- standard forms with which to collect data in the school;
- specific times at which schools are required to collect standard data;
- the specific data required to be collected and updated;
- data that the Ministry of Education requires be retained;
- data that the school board requires be retained.

2. Consent
   - standard forms on which to record the consent of parent/student;
   - procedures for gaining approval for research to be conducted with student data;
   - categories of consent appropriate for the use of student data in research.

3. Access
   - information required by the principal in request for access to the SIS;
   - procedures principals use to identify parents who ask for access to the SIS;

- procedures to use when request for data is received by telephone;
- procedures principals use to record refusal of access to the SIS;
- procedures principals use when a consent to gain access is presented;
- information to be recorded in the access log;
- where the access log is to be kept;
- procedure used on receiving request to transfer records to new school;
- transfer procedure used when reports of individual assessments are included in the SIS;
- transfer procedure used when reports from non-school board agency are included;
- disposition of records held in school one year and then three years after pupil retires;
- disposition of transfer requests received after records sent to central board office.

4. Security
    - procedures for destroying data and documents removed from the SIS;
    - necessary security arrangements for records retained in the schools;
    - necessary security arrangements for records retained in the central board office;
    - necessary security arrangements for records retained in the central board office computer;
    - necessary security arrangements to prevent abuse of access through school terminals.

5. Informing
    - specific times and modes by which parents are to be informed of the SIS;
    - types of information on the SIS that are to be provided to parents/students;
    - types of information on the SIS that are to be provided to teachers.

6. Accuracy
    - procedures to be employed to ensure the accuracy of data entering the SIS;
    - feedback processes to correct data already in the SIS;
    - procedures for dealing with a request to remove data from the SIS;
    - procedures for the refusal of a request to remove data.

7. Completeness
    - procedures for review to ensure the completeness of data in the SIS;
    - procedures for requesting the supplementation of data in the SIS;
    - procedures for the refusal to add data to the SIS.

8. Pertinence
    - procedures for review to ensure the pertinence of data in the SIS;
    - procedures for the purging of non-pertinent data from the SIS;
    - procedures for dealing with a request to remove non-pertinent data from the SIS;
    - procedures for the refusal of a request to remove data from the SIS.

9. Timeliness
    - procedures for updating to ensure the timeliness of data in the SIS;
    - procedures for the removal of out-of-date data from the SIS;
    - procedures for dealing with a request to update or remove data from the SIS;
    - procedures for the refusal of a request to update or remove data from the SIS.

Conclusion

The conclusions and recommendations in this report are based upon a review of relevant literature, statutes, case law, and commentary, on a generic model of effective information management, on consultation with practitioners and consumers affected by student records, and extensive field research across the province. Development and enactment of an integrated Student Information System and concomitant network will require, in some regards, a reconceptualization of the issues of student data and their protection, and will build on a forward-looking structure. This report is submitted to strengthen and improve educational services, and to strengthen respect for the individuals who provide and receive those services.

References

Alexander, E. R., & Dunlop, J. B. (1979). *Case materials on the law of torts.* Toronto: Faculty of Law, Univeristy of Toronto. Experimental Edition, Part 1.

Anthony, R. N. (1965). *Planning and control systems: A framework of analysis.* Boston: Harvard University Graduate School of Business Administration.

Artre, S. (1980). *Data-base: Structural techniques for design performance and management.* New York: John Wiley & Sons.

Bailey, A. H. (1973). The student file: A strategy for handling confidential information. *The Clearing House, 47,* 351-352.

Ball, L. D. (1977, February). Maintaining security and privacy in educational computer centers: A growing problem. *A.E.D.S. Journal,* pp. 6-13.

Barnfather, T., & Rosmanitz, F. (1981). A successful automated online transcript system. *Cause/Effect, 44,* 30-34.

Barsch, R. H. (1969). *The parent-teacher partnership.* Arlington, VA: Council for Exceptional Children.

Beer, S. (Ed.). 1979. (1979). *The heart of enterprise: The managerial cybernetics of organization.* Chichester, England: John Wiley & Sons.

Beer, S. (1981). *Brain of the firm: A development in management cybernetics* (2nd ed.). Chichester, England: John Wiley & Sons.

Bell, D. A. (1962). *Intelligent machines: An introduction to cybernetics.* New York: Blaisdell.

Bevan, J. E., & Caruso, L. R. (1970). Privacy and confidentiality of student records: A legal view. *College and University, 45,* 645-653.

Black, H. C. (1979). *Black's law dictionary* (5th ed.). St. Paul, MN: West Publishing.

Brannon, J. (1974). Access to student records: Family education rights and privacy act of 1974 *School Law Bulletin, 5.*

Braun, C. (1976). Teacher expectations: Sociopsychological dynamics. *Review of Educational Research, 46,* 185-213.

Burns, P. (1980). Privacy and the common law: A tangled skein unravelling. In D. Gibson (Ed.), *Aspects of privacy law.* Toronto: Buttersworth.

Clemson, B. (1978). Beyond management information systems. *Educational Administration Quarterly, 14*(3), 13-38.

Cooper, H. M. (1979). Some effects of pre-performance information on academic expectations. *Journal of Educational Psychology, 71*(3), 375-380.

Cornell, J. M., Baudot, J., Kirsch, C., & Williams, J. S. . (1972). Personal records: Procedures, practices, and problems. In *A report of the task force on privacy and computers.* Ottawa: Information Canada.

Cosman, R. W. (1982). Ontario's legal system and special education appeals. In A. Keeton (Ed.), *Bill 82: The legal agenda* . O.C.L.E.A..

Crowford, S. (1978). Information needs and uses. *Annual Review of Information Science and Technology, 13*, 61-82.

Davidson, I. F. W. K., Manuel, P. A., & Humphreys, E. H. (1984). *Current needs of student information systems in Ontario* (Report No. 6). Toronto: Department of Educational Administration, OISE.

Davidson, I. F. W. K., Silverman, H., & Hughes, M. (1981). *Learning abilities: Identification and intervention practices*. Toronto: Ontario Ministry of Education.

Dial, O. E., & Goldbert, E. M. (1975). *Privacy, security and computers: Guidelines for municipal and other public information systems*. New York: Praeger.

Feeney, J. D., Humphreys, E. H., & Davidson, I. F. W. K. (1982). *Criteria of effectiveness of a student information management system* (Report No. 1). Toronto: Department of Educational Administration, OISE.

Feeney, J. D., Humphreys, E. H., & Davidson, I. F. W. K. (1982). *Criteria of effectiveness of a student information management system* (ReportNo. 1). Toronto: Department of Educational Administration, OISE.

Feinman, S., Mick, C. K., Saalberg, J., & Thompson, C. W. N. (1976). A conceptual framework for information flow studies. *Proceedings, 39th Annual Meeting of A.S.I.S., 13*, 106.

Fiester, A. R. (1978). The Access system: A procedure for evaluating children's services at community mental health centers. *Community Health Journal, 14*(3), 224-232.

Getson,R., & Schweid, R. (1976). School counsellors and the Buckley amendment: Ethical standards squeeze. *School Counsellor, 24*(2), 56-58.

Gibson, D. (Ed.). (1980). *Aspects of privacy law*. Toronto: Butterworths.

Gordon, I. J. (1970). *Parental involvement in compensatory education*. Urbana, IL: University of Illinois Press.

Gorham, K. (1975). Parent involvement: The parent and the professional. In N. Hobbs (Ed.), *The futures of children*. San Francisco: Jossey-Bass.

Huff, E. E. (1975). Ethical practices regarding student records. *Student Guidance Worker, 21*(4), 22-25.

Hoffman, L. J. (1973). *Security and privacy in computer systems*. Los Angeles: Melville Pub. Co.

Honig, A. S. . (1975). *Parental involvement in early childhood education*. Washington, DC: National Association for the Education of Young Children.

Humphreys, E. H., & Elwood, B. C. . (1974(a)). *Survey of Professional Educators' Use and Sources of Student Information*. Toronto: Department of Educational Planning, OISE.

Humphreys, E. H., & Elwood, B. C. (1974(b)). *Survey of Professional Educators' Views as to the Needs and Preferred Sources of Student Information* (Mimeo). Department of Educational Planning, OISE.

Humphreys, E. H., & Elwood, B. C. (1975). *The OSR User: Needs, preferences, perceptions and practices*. Toronto: Department of Educational Planning, OISE.

Humphreys, E. H., & Elwood, B. C. (1976). *Effectiveness of the Revised Ontario School Record System*. Toronto: Ontario Ministry of Education.

Humphreys, E. H., & Weintraub, L. S. (1983). *Legal aspects of student information in*

Ontario (Report No. 2). Toronto: Department of Educational Administration, OISE.

Humphreys, E. H. (1977). The use of the cumulative student records as a source: The planner and student privacy. *Educational Planning, 4*, 64-72.

Humphreys,E. H. (1982). Policy and privacy of student information in Canada. *Canadian Journal of Education*, 7(3), 25-38.

Humphreys, E. H., Davidson, I. F. W. K., & Feeney, J. D. (1983). *The student information system: A model* (Report No. 5). Toronto: Department of Educational Administration, OISE.

Humphreys, E. H., Feeney, J. D., Davidson, I. F. W. K., & Weintraub, L. S. (1983). *Student records in Ontario's schools: A description and analysis of use* (Report No. 3-4). Toronto: Department of Educational Administration, OISE.

Humphreys, E. H. (1980). *Privacy in Jeopardy: Student records in Canada*. Toronto: OISE Press.

Hussain, K. M. (1973). *Development of information systems for education*. Englewood Cliffs, NJ: Prentice-Hall.

Johnson, J. H., Giannet, R. A., & Williams, T. A. (1973). Computers in mental health care delivery: A review of the evolution toward interventionally relevant on-line processing. *Behavior Research Methods and Instrumentation, 8*(2), 83-91.

Katz, R. (1972). *Regulations of federal data banks: A report of the task force on privacy and computers*. Ottawa: Information Canada.

Kavine, G. (1978). Better pupil record keeping: A hallmark of educational professionalism. *Education, 98*, 455-459.

Keeton, A., & Hanson, F. (1983). *A consumer's guide to Bill 82*. Toronto: OISE Press.

Keeton, A. (1982). Teacher liability and Bill 82. *Field Development Newsletter, 6*.

Kelly, H. M. (1981, October). *Consent forms*. Paper presented to 3rd Annual Conference of the Canadian Institute of Law and Medicine.

Kelly, H. M. (1983). A legal opinion of Bill 82 implications and the OSR. In E. H. Humphreys & L. S. Weintraub (Eds.), *Legal aspects of student information in Ontario*. Toronto: Department of Educational Administration, OISE.

Kiewith, E. (1979). *Evaluating information retrieval systems: The Prope program*. Westport, CT: Greenwood Press.

King, D. W., & Bryant, E. C. (1971). *The evaluation of information services and products*. Washington, DC: Information Resources Press.

Krever, Hon. Justice K. (1980). *Report of the commission of inquiry into the confidentiality of health information*. Toronto: Queen's Printer.

Langefors, B. (1973). *Theoretical analysis of information systems* (4th ed.). Philadelphia, PA: Auerback.

Lanman, R. B. (1980). The federal confidentiality protection for alcohol and drug abuse patient records: A model for mental health and other medical records. *American Journal of Orthopsychiatry, 50*(4), 666-677.

Ligon, H. H. (1978). *Success management information systems*. Ann Arbor, MI: U.M.I. Research Press.

Lincoln, V. (1980, April). *Documentary analysis and record utilization: New uses for old methods*. Paper presented to meeting of AERA.

Magsino, R. (1982). Rights in Canadian education. In *Canadian society for the study of education yearbook*. Canadian Society for the Study of Education.

Martin, J. (1973). *Design of man-computer dialogues*. Englewood Cliffs, NJ: Prentice-Hall.

Martin, J. (1973). *Accuracy and privacy in computer systems*. Englewood Cliffs, NJ: Prentice-Hall.

Martin, J. (1976). *Principles of data-base management*. Englewood Cliffs, NJ: Prentice-Hall.

Martyn, J. (1974). Information needs and uses. *Annual Review of Information Science and Technology, 9*, 3-23.

Metropolitan Separate School Board. (1979). *The court and you*. Mimeo. Toronto: Author.

Minnesota State Department of Education. (1974). *Guidelines for collection, maintenance and release of pupil records*. St. Paul, MN: Author.

Mintzberg, H. (1978). *The structuring of organizations*. Englewood Cliffs, NJ: Prentice-Hall.

Murdick, R. C., & Ross, J. E. (1975). *Information systems for modern management*. Englewood Cliffs, NJ: Prentice-Hall.

Murray, A. J. (Ed.). (1972). *Information processing and the right to privacy: A crossroads decision for North America*. Windsor: University of Windsor Press.

Niblett, G. B. F. (1971). *Digital information and privacy problems*. Paris: Organization for Economic Cooperation and Development.

Nolte, M. C. (1977). Read this before you allow sensitive information to be released about students. *New Dimensions, 6*, 12-13.

Ontario, Ministry of Education. (1982, November). *The renewal of secondary education in Ontario: Response to the Report of the Secondary Education Review Project*. Toronto: Author.

Ontario, Ministry of Education. (n.d.). *Educational computer network of Ontario (ECNO)*. Toronto: Queen's Printer.

Ontario, Government of. (1982, September). *Education Act, Revised Statutes of Ontario, 1980, Chapter 129*. Toronto: Queen's Printer.

Padro, S. (1977). *Information systems: Analysis for the Peel Board of Education*. Toronto: Department of Educational Planning, OISE.

Putnam, J. (1974). Student/pupil accounting: Standard terminology and guide for managing student data in elementary education. In *State Educational Records and Reports. Handbook V (Rev. ed.)*. Washington, DC: National Center for Educational Statistics, Department of Health, Education, and Welfare.

Russell Sage Foundation. (1972). *Guidelines for the collection, maintenance and dissemination of pupil records*. Toronto: Author, and the University of Toronto Guidance Centre.

Safer, N., Lewis, L., Morrissey, P., & Kaufman, M. (1978). Implementation of IEPs: New teacher roles and requisite support systems. *Focus on Exceptional Children, 10*, 1-20.

Shipman, V. (1981). Perspectives on early identification and intervention. In H. Silverman, I. F. W. K. Davidson, & L. S. Weintraub (Eds.), *Early identification and intervention: Selected proceedings*. Toronto: Ontario Ministry of Education.

Silverman, H., Davidson, I. F. W. K., & Weintraub, L. S. (Eds.). (1981). *Early identification and intervention: Selected proceedings*. Toronto: Ontario Ministry of Education.

Simon, H. A. (1975). *The new science of management decisions*. New York: Harper & Row.

Smith, J. A. C. (1980). The right to an appropriate education: A comparative study. *Ottawa Law Review, 12*, 367.

Somerville, M. A. (1979). *Consent to medical care: A study paper prepared for the Law Reform Commission of Canada*. Ottawa: Minister of Supply and Services, Canda.

Swanson, R. W. (1975). Design and evaluation of information systems. *Annual Review of Information Science and technology, 10*, 43-101.

Toffler, A. (1970). *Future shock*. New York: Bantam Books.

Usher, L. (1982). What can we learn from issues in U.S. education litigation? In A. Keeton (Ed.), *Proceedings of O.C.L.E.A. Meeting* . Toronto: O.C.L.E.A..

Walden, J. C. (1974, Sept.-Oct.). Privileged communication: Law and school principals. *National Elementary Principal, 54*, 86-38.

Weed, J. C. (1969). *Medical records, medical education and patient care: The problem oriented record as a basic tool.* Cleveland, OH: Case Western Reserve University Press.

Weintraub, L. S., & Anand, R. (1981). *Parent involvement and Ontario's school system*. Toronto: Ontairo Ministry of Education. Mimeo.

Weintraub, L. S. (1984, April). The subversive administrator. *The canadian School Executive*.

Weistub, D. M., & Gollich, C. C. (1972). The nature of privacy . In *Report of the Task Force on Privacy and Computers*. Ottawa: Information Canada.

Wilson, C. M. & Olds, R. (1975). *Student records: How to prepare and manage them*. Westerville, OH: School Management Institute.

Yoshida, R. K., & Gottlieb, J. (1977). A model of parental participation in the pupil planning process. *Mental Retardation, 15*, 17.

Zunde, P., & Gehl, J. (1979). Empircal foundations of information science. *Annual Review of Information Science and Technology, 14*, 67-92.

Appendix A

The Ontario Institute for Studies in Education
252 Bloor Street West, Toronto, Ontario M5S 1V6 Tel. 923-6641

Department of Educational Administration

INFORMATION SHEET, STUDENT RECORDS RESEARCH PROJECT.
"Research on the Adequacy of the OSR in Accommodating the Record Keeping Ramifications of Bill 82"

INTRODUCTION

Since the original Ontario School Record (OSR) was developed in 1950, the process of evaluation and revision of the record has kept it in the forefront of student data management systems in Canada. In 1973 major changes to the format and legislation governing the OSR recognized the issues of privacy and confidentiality to a much greater degree. It aims at a record open to parents and students that emphasizes the positive attainments of a student.

The 1980 passage of Bill 82 necessitates a major review of the role of student records in the education of Ontario children. Consequently the Ontario Ministry of Education has contracted with the Ontario Institute for Studies in Education to conduct a study to consider the ways in which student data management might be designed to meet the needs arising from Bill 82.

PURPOSE OF THE STUDY

The research project will examine three major areas with reference to systems of student records management. These include:

(1) study of privacy, confidentiality, the right to know, consent and similar issues related to the integrity of the individual;
(2) questions regarding how student information is managed, maintained, used and controlled through manual, mechanical and computer systems;
(3) investigation of information needs and concerns with reference to special education, early identification and review of student needs, and evaluation of students, placements and programs.

Using the above objectives as the research framework, the project will:

(1) investigate the nature of record-keeping practices in a representative sample of Ontario school systems, with particular reference to Bill 82;
(2) develop criteria and models of data management that will not only meet the requirements arising from Bill 82 but also acknowledge diversity of school board needs and integrity of the individual.

METHODS

In order to achieve its objectives, the researchers will conduct a review of relevant literature, examine and analyze Ministry and Board documents, examine and analyze randomly selected student records and, with one third of the Boards, conduct intensive interviews with a wide variety of educators, other professionals and parents/students. It should be noted that the Ministry's concern includes all forms of student record-keeping: the OSR, computer-stored data, psychological, health, discipline, identification and assessment data, standardized test scores, developmental profiles, attendance records, school activity records and information gathered by and shared with various professionals.

. . . 2

Documents outlining record management origins, policies, procedures, practices and problems will be studied. Field interviews to clarify that information as well as to obtain an overview of decision-making processes about early identification, categorization, placement, evaluation and reassessment will follow. Student records and any attendant interviews will be analyzed for the types or categories of stored information. For example, the fact that a standardized test score was recorded in a file will be noted, but the actual score and individually identifying features will not be noted. Interviews will be conducted with teachers, administrators, consultants, other school/Board staff and, in the more intensive study, with medical/health professionals, psychologists, psychometrists, child care workers, social workers, counsellors, attendance and community liaison officers and so forth. The focus of such interviews will be on system-wide policies, procedures and practices.

PRIVACY AND CONFIDENTIALITY

Because the collection of student-related data is an essential component of the research methodology, the Ministry, the Ontario Institute for Studies in Education and the research project staff have developed stringent safeguards for protecting the privacy of individuals. In addition to the previously discussed research focus on category rather than content of information stored, the examination of student records will be carried out so as to protect privacy of information. No individually identifiable data will be removed from school board premises or stored in any form that will permit identification. Furthermore, data collected through interviews will also be protected and not be attributable to individuals, schools or school boards. All project staff have been instructed and trained in the protection of confidentiality, and will be supervised within the context of these stringent standards.

SOME PRACTICAL QUESTIONS

Q: WILL BOARDS DERIVE ANY BENEFITS FROM PARTICIPATING IN THE STUDY?
A: Yes, the project will offer Boards an overview of their findings and will make available guidelines for changes to information management systems required by Bill 82 and by Board needs.

Q: WHEN WILL THE FIELD STUDIES BE CONDUCTED AND HOW MUCH TIME WILL THEY INVOLVE?
A: Both the Ministry and the project will contact the Boards between February and April 1982, and all field work will be completed by June. Between one and three days at each Board's office, and approximately one day at each participating school will be required.

Q: WHO CAN BE CONTACTED FOR MORE INFORMATION ABOUT THE PROJECT?
A: Dr. Edward H. Humphreys, Principal Investigator
Ms. Laura Weintraub, Research Officer
Dr. Mohindra Gill, Research Officer

Department of Educational Administration, 7th floor,
Ontario Institute for Studies in Education,
252 Bloor Street West, Toronto M5S 1V6
(416) 923-6641, ext, 406/418

The Ontario Institute for Studies in Education
252 Bloor Street West, Toronto, Ontario M5S 1V6 Tel. 923-6641

Department of Educational Administration

PROCEDURES TO MAINTAIN PRIVACY AND CONFIDENTIALITY, OSR RESEARCH PROJECT

The following procedures will be maintained to ensure the protection of the privacy and confidentiality of all individuals, schools and boards who participate in the OSR Research Project.

1. To protect the privacy and confidentiality of data collected from student records, coding to delete identifying data will take place in the schools. Discussion of individually identifiable data will occur only when necessary to carry out the duties of the Project within a board. All identifying information will be destroyed upon completion of data collection from school and board files.

2. To protect the privacy and confidentiality of data collected from interviews and surveys, all written research data will be stored in locked cabinets at O.I.S.E. and removed only when necessary for the study's purposes. No individual, school or board will be identified in any of the Research Project's written or verbal reports. Comparative discussion in the field, in reports and with the Ontario Ministry of Education will be limited to non-identifiable information.

3. Where the use of tape recorders will simplify note-taking during interviews, such recording will only take place with the express permission of all individuals involved. Tapes will be stored in locked cabinets at O.I.S.E. and all taped conversations will be destroyed following data analysis procedures.

4. All project staff will participate in training sessions including discussion of privacy, confidentiality and Section 237 of the Education Act, to ensure full awareness of moral, ethical and legal responsibilities regarding project data.

Additional questions about the study are answered in the OSR Research Project's Information Sheet. Should you have any questions or concerns, please do not hesitate to contact Dr. E. H. Humphreys, Principal Investigator and Associate Professor, Department of Educational Administration, O.I.S.E. Tel. (416) 923-6641, ext. 406/418.

Appendix B

Central Board Office Interviews

FUNCTIONS

carried out by personnel at
central or area board offices.

80. Early Identification
81. Student placement
82. Administrative Data Processing
83. Attendance Counselling
84. Psychological Assessing
85. Ongoing Assessment
86. Parent Counselling
87. Program Design
88. Program Development
89. Health Monitoring
90. Staff Preparation
91. Staff Supervision
92. Planning of Facilities
93. Reporting to Board
94. Reporting to Ministry

Other function(s) specify

95. ________________________

96. ________________________

Part 1: page 1

B(i)p.2

FUNCTION ____________________

Central Education Office

Interviews

ID. ☐☐☐☐☐ 8 9

a) Process

-People?

-procedures?

b) Documents

-list?

-obtain copy?

-format?

-when collected?

-disposition

c) New data

-kinds?

-person source?

-format?

-when collected?

-disposition?

d) New data

-other uses?

-how shared?

-when shared?

-any backup?

Part 1: page 1

B(i)p.3

Central Education Office

Interviews

FUNCTION__________________

ID. ☐☐☐☐☐ 8 9

a) Process

-People?
-procedures?

b) Documents

-list?
-obtain copy?
-format?
-when collected?
-disposition

c) New data

-kinds?
-person source?
-format?
-when collected?
-disposition?

d) New data

-other uses?
-how shared?
-when shared?
-any backup?

Part 1: page 1

B(i)p.4

Central Education Office

Interviews

FUNCTION____________

ID. ☐☐☐☐☐ 8 9

a) Process

-People?
-procedures?

b) Documents

-list?
-obtain copy?
-format?
-when collected?
-disposition

c) New data

-kinds?
-person source?
-format?
-when collected?
-disposition?

d) New data

-other uses?
-how shared?
-when shared?
-any backup?

Part 1: page 1

B(i)p.5

Central Education Office

Interviews

FUNCTION________________

ID. ☐☐☐☐☐
8 9

a) Process

-People?
-procedures?

---

b) Documents

-list?
-obtain copy?
-format?
-when collected?
-disposition

---

c) New data

-kinds?
-person source?
-format?
-when collected?
-disposition?

---

d) New data

-other uses?
-how shared?
-when shared?
-any backup?

Central Education Office Interviews

ID. ☐☐☐☐☐ 8 9

Please complete part 2 with reference to central office files

Is parent/student consent obtained prior to:		CODING
1. a) Collecting data? yes -1 no -0		11
b) if yes; How? written -1 verbal -2	b) if no; Is parent informed?	12
c) Disposition?	yes -5 no -6	13
	c) How?	14
2. a) Storing data? yes -1 no -0		15
b) if yes: How? written -1 verbal -2	b) if no; Is parent informed?	16
c) Disposition?	yes -5 no -6	17
	c) How?	18
3. a) Sharing data? yes -1 no -0		19
b) if yes: How? written -1 verbal -2	b) if no; Is parent informed?	20
c) Disposition?		21
	c) How? yes -5 no - 6	22
4. Is parent/student able to withdraw consent? a) yes -1 no -0		
Describe Procedure		23
b)		24
5. a) Do you inform parents/students of existance of central student records?		25
b) How?	yes -1 no -0	26
c) When?		27
6. a) Do you inform parents/students of their rights regarding student records?		28
b) How?	yes -1 no -0	29
c) When?		30

3(i)p.7
ID. ☐☐☐☐☐
☐☐ 8 9

Part 2. p. 2 Central Education Office Interviews

Please complete part 2 with reference to central office files.

CODING

7. a) Do you inform parents/students of what information is stored in the central student records yes -1 no -0 31 ☐
   b) How? 32 ☐
   c) When? 33 ☐

8. a) Do you inform parents/students of other files that may be held on them? yes ___ no ___ yes -1 no -0 34 ☐
   b) How? 35 ☐
   c) When? 36 ☐

9. a) Do you retain a log of your contacts with parents/students? yes -1 no -0 37 ☐
   b) How? 38 ☐

10. WHO HAS ACCESS TO:

Student Data In	Before filing (during collection)	Once it is filed	after data has been used	
a) Central Office files	39	40	41	39 ☐ 40 ☐ 41 ☐
b) Your personal files	42	43	44	42 ☐ 43 ☐ 44 ☐
c) Other files (specify) ________ ________	45	46	47	45 ☐ 46 ☐ 47 ☐

11. Do you retain a log of who:
   a) Requests access to the student information files? yes -1 no -0 48 ☐
   b) Obtains access to the student information files? yes -1 no -0 49 ☐

Central Education Office Interviews

ID. ☐☐☐☐☐ 8 9

Please complete part 2 with reference to central office files

12. How do you control access to:

Student Data In	1. Before filing (during collection)	2. Once it is filed	After data has been used	CODING
a) Central Office Files	50	51	52	50 ☐ 51 ☐ 52 ☐
b) Your personal files	53	54	55	53 ☐ 54 ☐ 55 ☐
c) Other (specify)	56	57	58	56 ☐ 57 ☐ 58 ☐

13. How do you control dissemination of:

Data From	1. Before filing (during collection)	2. Once it is filed	3. After data has been used	
a) Central Office Files	59	60	61	59 ☐ 60 ☐ 61 ☐
b) Your personal files	62	63	64	62 ☐ 63 ☐ 64 ☐
c) Other (specify)	65	66	67	65 ☐ 66 ☐ 67 ☐

Part 1: page 1

Appendix B(ii)

School Interviews

FUNCTION ☐☐

ID. ☐☐☐☐☐
☐☐ 6,7
☐☐ 8,9

a) Process

-People?
-procedures?

b) Documents

-list?
-obtain copy?
-format?
-when collected?
-disposition

c) New data

-kinds?
-person source?
-format?
-when collected?
-disposition?

d) New data

-other uses?
-how shared?
-when shared?
-any backup?

School Interviews

FUNCTION ☐☐ ________

ID. ☐☐☐☐☐
☐☐ 6,7
☐☐ 8,9

a) Process

-People?
-procedures?

---

b) Documents

-list?
-obtain copy?
-format?
-when collected?
-disposition

---

c) New data

-kinds?
-person source?
-format?
-when collected?
-disposition?

---

d) New data

-other uses?
-how shared?
-when shared?
-any backup?

Part 1: page 1

B(ii)p.3

School Interviews

FUNCTION ☐☐ ____________

ID. ☐☐☐☐☐

☐☐ 6,7

☐☐ 8,9

a) Process

-People?
-procedures?

b) Documents

-list?
-obtain copy?
-format?
-when collected?
-disposition

c) New data

-kinds?
-person source?
-format?
-when collected?
-disposition?

d) New data

-other uses?
-how shared?
-when shared?
-any backup?

Part 1: page 1

B(ii)p.4

School Interviews

FUNCTION ☐☐

ID. ☐☐☐☐
☐☐ 6,7
☐☐ 8,9

a) Process

-People?
-procedures?

b) Documents

-list?
-obtain copy?
-format?
-when collected?
-disposition

c) New data

-kinds?
-person source?
-format?
-when collected?
-disposition?

d) New data

-other uses?
-how shared?
-when shared?
-any backup?

School Interviews

Part 2: p. 1

ID. ☐☐☐☐☐

Is parent/student consent obtained prior to:		CODING
1. a) Collecting data? yes -1 no -0		11
b) if yes; How? written -1 verbal -2	b) if no; Is parent informed? yes -5 no -6	12
c) Disposition?	c) How?	13
		14
2. a) Storing data? yes -1 no -0		15
b) if yes: How? written -1 verbal -2	b) if no; Is parent informed? yes -5 no -6	16
c) Disposition?	c) How?	17
		18
3. a) Sharing data? yes -1 no -0		19
b) if yes: How? written -1 verbal -2	b) if no; Is parent informed? yes -1 no -0	20
c) Disposition?	c) How?	21
		22
4. Is parent/student able to withdraw consent? a) yes -1 no -0		
Describe Procedure		23
b)		24
5. a) Do you inform parents/students of existance of O.S.R.? yes -1 no -0		25
b) How?		26
c) When?		27
6. a) Do you inform parents/students of their rights regarding O.S.R.s? yes -1 no -0		28
b) How?		29
c) When?		30

B(ii)p.6

School Interviews

Part 2: p. 2

ID. ☐☐☐☐☐

CODING

7. a) Do you inform parents/students of what information is stored in the O.S.R.? yes -1 no -0 — 31 ☐
   b) How? — 32 ☐
   c) When? — 33 ☐

8. a) Do you inform parents/students of other files that may be held on them? yes ___ no ___ yes -1 no -0 — 34 ☐
   b) How? — 35 ☐
   c) When? — 36 ☐

9. a) Do you retain a log of your contacts with parents/students? yes -1 no -0 — 37 ☐
   b) How? — 38 ☐

10. WHO HAS ACCESS TO:

Student Data In	Before filing (during collection)	Once it is filed	after data has been used	
a) O.S.R. s	39	40	41	39 ☐ 40 ☐ 41 ☐
b) Your personal files	42	43	44	42 ☐ 43 ☐ 44 ☐
c) Other files (specify) ________ ________	45	46	47	45 ☐ 46 ☐ 47 ☐

11. Do you retain a log of who:
   a) Requests access to the O.S.R.? yes -1 no -0 — 48 ☐
   b) Obtains access to the O.S.R.? yes -1 no -0 — 49 ☐

School Interviews

ID. ☐☐☐☐

Part 2: p. 3

12. How do you control access to:

Student Data In	1. Before filing (during collection)	2. Once it is filed	After data has been used	CODING
a) O.S.R.s	50	51	52	50 ☐ 51 ☐ 52 ☐
b) Your personal files	53	54	55	53 ☐ 54 ☐ 55 ☐
c) Other (specify)	56	57	58	56 ☐ 57 ☐ 58 ☐

13. How do you control dissemination of:

Data From	1.Before filing (during collection)	2. Once it is filed	3. After data has been used	
a) O.S.R.s	59	60	61	59 ☐ 60 ☐ 61 ☐
b) Your personal files	62	63	64	62 ☐ 63 ☐ 64 ☐
c) Other (specify)	65	66	67	65 ☐ 66 ☐ 67 ☐

PARENTS'/STUDENT'S INTERVIEW GUIDE

Interview Date: ______________________

Interview I.D. #: ☐☐☐☐☐

Names	Number of siblings/ children in the school system	Grade Level(s)	Other relevant information e.g. attendance in special program/class
1.			
2.			
3.			
4.			
5.			

Interviewer's Name (s) 1.______________________
2.______________________

B(iii)p.2

PARENTS/STUDENTS INTERVIEW GUIDE

CODE ☐☐☐☐☐
☐☐ 8,9

DIRECTION: Record the interviewees' collective responses by circling the appropriate numberor by writing in the space provided.

1.	Are you aware of the existence of student records? Frequency of "Yes" response ... 1, 2, 3, 4, 5.						11
2.	If yes, who informed you that student records are kept?						
		Frequency of "Yes" response					
	a. School personnel	1	2	3	4	5	12
	b. Board personnel	1	2	3	4	5	13
	c. Other parent/student	1	2	3	4	5	14
	d. My child/parents	1	2	3	4	5	15
	e. General knowledge (e.g. media)	1	2	3	4	5	16
	f. Other (specify ________________	1	2	3	4	5	17
3.	Has the school/board ever approached you for permission to:	Frequency of "Yes" response					
	a) gather information about your children?	1	2	3	4	5	18
	b) store information about your children	1	2	3	4	5	19
	c) share information with people in the school/board	1	2	3	4	5	20
	d) share that information with people outside of the school board?	1	2	3	4	5	21

PARENTS/STUDENTS INTERVIEW GUIDE

CODE ☐☐☐☐☐

4. Are you aware that parents/students have access to the OSR?

Frequency of "Yes" response ... 1, 2, 3, 4, 5. 22

5. If yes, who informed you about this?

	Frequency of "Yes" response					
a) School personnel	1	2	3	4	5	23
b) Board personnel	1	2	3	4	5	24
c) Other parents/students	1	2	3	4	5	25
d) My child/parents	1	2	3	4	5	26
e) General knowledge (e.g. media)	1	2	3	4	5	27
f) Other (specify) ____________	1	2	3	4	5	28

6. Have you or your children/parent ever asked to see your/child's OSR?

	Frequency of "Yes" response					
Parent	1	2	3	4	5	29
Children	1	2	3	4	5	30

7. If yes, for what purpose?

	Frequency of "Yes" response					
a) General information	1	2	3	4	5	31
b) Concern about placement	1	2	3	4	5	32
c) Obtaining transcripts	1	2	3	4	5	33
d) Obtaining transfer information	1	2	3	4	5	34
e) Obtaining info. about job applications	1	2	3	4	5	35
f) Obtaining info. for higher ed. applctns.	1	2	3	4	5	36
g) Other (specify) ____________	1	2	3	4	5	37

PARENTS/STUDENTS INTERVIEW FORM

CODE ☐☐☐☐☐

8. Describe what happened following your request? 38 39

9. What type of information is in the OSR? 40 41

10. Are you aware that parents may ask for removal or correction of information in the OSR?

Frequency of "Yes" response ... 1, 2, 3, 4, 5. 42

11. If yes, who informed you about this?

	Frequency of "Yes" response					
a) School personnel	1	2	3	4	5	43
b) Board personnel	1	2	3	4	5	44
c) Other parents/students	1	2	3	4	5	45
d) My child/parents	1	2	3	4	5	46
e) General knowledge (e.g. media)	1	2	3	4	5	47
f) Other (specify) ____________	1	2	3	4	5	48

12. Have you ever requested such a change or removal?

Frequency of "Yes" response ... 1, 2, 3, 4, 5. 49

13. If so, describe what happened.

50 51 ☐☐

PARENTS/STUDENTS INTERVIEW GUIDE

CODE ☐☐☐☐

14. Are you aware that your written consent is required before most people may have access to student records?

Frequency of "Yes" response 1 2 3 4 5 52

15. Have you ever been asked to give a written consent for someone to have access to student information in an OSR?

Frequency of "yes" response...........................1 2 3 4 5 53

16. If yes, who may have access to your student(s) record without requiring your written consent?

	Frequency of "Yes" response					
a). Principal	1	2	3	4	5	54
b). Classroom Teachers	1	2	3	4	5	55
c). Guidance Counsellors	1	2	3	4	5	56
d). Superintendents	1	2	3	4	5	57
e). School System Psychologists, Social Workers etc.	1	2	3	4	5	58
f). Police	1	2	3	4	5	59
g). Social agencies	1	2	3	4	5	60
h). Universities	1	2	3	4	5	61
i). Prospective employers	1	2	3	4	5	62

17. Who informed you of who has access?

	Frequency of "Yes" response					
a) School personnel	1	2	3	4	5	63
b) Board personnel	1	2	3	4	5	64
c) Other parents/students	1	2	3	4	5	65
d) My child/parent	1	2	3	4	5	66
e) General knowledge (i.e. media)	1	2	3	4	5	67
f) Other (specify) ____________	1	2	3	4	5	68

18. Does your school have adequate information with which to make program decisions for individual students? yes -1 No -0 69

if no:

19. What additional kinds of information should your school collect and keep in order to assist them in making program decisions and advising students?

	Frequency of "Yes" response					
a) Academic Marks	1	2	3	4	5	70
b) Family background	1	2	3	4	5	71
c) Medical History	1	2	3	4	5	72
d) Personal Characteristics	1	2	3	4	5	73
e) Standardized Test Data	1	2	3	4	5	74
f) Individual Psychological Assessments	1	2	3	4	5	75
g) Early childhood background	1	2	3	4	5	76
h) Teacher observations	1	2	3	4	5	77
i) Anecdotal records	1	2	3	4	5	78

20. Have you any suggestions for improving collection maintenance, security, dissemination or use of student information? 79

Appendix C

May 1982

Dear Respondent:

We are requesting your assistance in completing a Central Board questionnaire which is part of an O.I.S.E. research project on the Student Information Ramifications of Bill 82. Your Board's Director of Education has approved participation, and we have enclosed Information and Privacy Sheets, which explain the study in more detail.

Please complete the eight page questionnaire at your earliest convenience, and return it sealed in the enclosed envelope to ________________________________. Our project staff will be at your Board shortly to collect the questionnaires and complete the remainder of our research tasks. If you have any concerns about the questionnaire or the project and would like to meet with our staff, please indicate this clearly on the front of the envelope together with your name (name only if you would like a meeting). All data we receive from you, in written or verbal form, will be held in complete confidence, and no identifying information will be stored or relayed.

We know that there are many demands upon your time, and greatly appreciate your cooperation.

Sincerely,
Dr. E.H. Humphreys,
Principal Investigator

Laura Weintraub,
Research Officer

EH/ch

Enclosures.

Accomodating The Student Information Ramifications of Bill 82

(Central Board Office Questionnaire)

____

8 9

As part of a extensive examination of the way in which student information is collected, stored, reviewed, used and disseminated in schools and school systems, in Ontario, we are asking your cooperation in providing information about the way in which you employ information on students. While the O.S.R. contains much of the data collected on students we are interested in all data that is related to, derived from or identifiable with individual students, regardless of where it is stored. The study will examine information use in schools and in central or area administrative offices. We are interested in your use of student information in order to improve its effectiveness. We appreciate your assistance.

This questionnaire is in two parts:

Part 1 asks you about your use of student information in carrying out a number of functions you perform in your work. It also asks the types of people with whom you share information in those functions.

Part 2 asks you about the procedures and measures your system takes to deal with student data that you now use.

We are interested in the way in which student information is dealt with at the present time rather than how it will be dealt with once Bill 82 has been fully implemented.

Part 1

Below is a list of functions that are carried out by personnel who are generally located at central or area offices of school systems. From the list, would you please choose three or four functions on which you use a substantial proportion of your time. Place a ☑ in the box beside each chosen function and write the name of the chosen function (and its number) in the space provided, one at the top of each of pages 2,3,4,and 5. eg.

Central Board Office Questionnaire

Function [7][4] Reporting to Board

Then, answer questions 1a to 2h for the function you have written in the space at the top of the page.

Functions:

☐ 61 Early Identification
☐ 62 Student Placement
☐ 63 Admin. Data Processing
☐ 64 Attendance Counselling
☐ 65 Psychological Assessing

☐ 66 Ongoing Assessment
☐ 67 Parent Counselling
☐ 68 Program Design
☐ 69 Program Development
☐ 70 Health Monitoring

☐ 71. Staff preparation
☐ 72. Staff supervision
☐ 73. Planning of Facilities
☐ 74. Reporting to Board
☐ 75 Reporting to Ministry
☐ Other function(s)
____
____

Please indicate your title in your school system

____

Central Office Questionnaire

Part 1

FUNCTION ☐☐ ______________

1. Name the title of people who participate in the above functions and describe processes or procedures that are use. ☐☐ 6, 7 ☐☐ 8, 9

a) Titles of participants b) Description of Processes and/or Procedures

2. Identify up to 3 types of information (e.g. family background), most important for you to carry out this function, by noting each type at the top of the columns below. Please answer the following questions for each type of information separately.

a) Types of information used in function.			
b) When is it collected?			
c) List people from whom you get this information			
d) List forms or documents from which you get this information			
e) Do you retain completed documents? where?			
f) Do you store information collected for this function? where?			
g) What other uses do you make of this information?			
h) Is this information shared with others? how? when?			

Please attach a copy of each form or document listed in (d).

C(i)p.4

Central Office Questionnaire

Part 1

FUNCTION ☐☐ ______________________ ☐☐☐☐

1. Name the title of people who participate in the above functions and describe processes or procedures that are use. ☐☐ 6, 7 ☐☐ 8, 9

a) Titles of participants b) Description of Processes and/or Procedures

2. Identify up to 3 types of information (e.g. family background), most important for you to carry out this function, by noting each type at the top of the columns below. Please answer the following questions for each type of information separately.

a) Types of information used in function.			
b) When is it collected?			
c) List people from whom you get this information			
d) List forms or documents from which you get this information			
e) Do you retain completed documents? where?			
f) Do you store information collected for this function? where?			
g) What other uses do you make of this information?			
h) Is this information shared with others? how? when?			

Please attach a copy of each form or document listed in (d).

Central Office Questionnaire

Part 1

FUNCTION ☐☐ ____________________ ☐☐☐☐

☐☐ 6, 7

☐☐ 8, 9

1. Name the title of people who participate in the above functions and describe processes or procedures that are use.

a) Titles of participants

b) Description of Processes and/or Procedures

2. Identify up to 3 types of information (e.g. family background), most important for you to carry out this function, by noting each type at the top of the columns below. Please answer the following questions for each type of information separately.

a) Types of information used in function.			
b) When is it collected?			
c) List people from whom you get this information			
d) List forms or documents from which you get this information			
e) Do you retain completed documents? where?			
f) Do you store information collected for this function? where?			
g) What other uses do you make of this information?			
h) Is this information shared with others? how? when?			

Please attach a copy of each form or document listed in (d).

Central Office Questionnaire

Part 1

FUNCTION ☐☐ ____________________

1. Name the title of people who participate in the above functions and describe processes or procedures that are use.

6, 7

8, 9

a) Titles of participants

b) Description of Processes and/or Procedures

2. Identify up to 3 types of information (e.g. family background), most important for you to carry out this function, by noting each type at the top of the columns below. Please answer the following questions for each type of information separately.

a) Types of information used in function.			
b) When is it collected?			
c) List people from whom you get this information			
d) List forms or documents from which you get this information			
e) Do you retain completed documents? where?			
f) Do you store information collected for this function? where?			
g) What other uses do you make of this information?			
h) Is this information shared with others? how? when?			

Please attach a copy of each form or document listed in (d)

CENTRAL EDUCATION OFFICE QUESTIONNAIRE

Part 2: P. 1

Part 2: p. 1
Please complete the following by circling or filling in the correct response. ☐☐☐☐☐
Please complete part 2 with reference to central office Student Records ☐☐ 8 9

CODING

1a) Is parent/student CONSENT obtained prior to:

COLLECTING DATA? .... yes -1 no -0 — 11

b) if yes: How is consent collected? — 12
written -1 verbal -2

e) if no: Is parent informed?
yes -5 no -6

c) Do you retain consent? yes -1 no -0 — 13 ☐

f) How is parent informed?

d) if yes: where? — 14
in OSR 1
in personal file 2
in other file (specify)
.......................3

2a) Is parent/student CONSENT obtained prior to:

STORING DATA? . . . . .yes -1 no -0 — 15

b) if yes: How is consent collected: — 16
written -1 verbal -2

e) if no: Is parent informed?
yes -5 no -6

c) Do you retain consent? yes -1 no -0 — 17 ☐

f) How is parent informed?

d) if yes: where? — 18
in OSR 1
in personal file......2
in other file (specify)
.....................3

3a) Is parent/student CONSENT obtained prior to:

SHARING DATA? . . . . yes -1 no -0 — 19

b) if yes: How is consent collected: — 20
written -1 verbal -2

e) if no: Is parent informed? — 21 ☐
yes -5 no -6

c) Do you retain consent? yes -1 no -0 — 22

f) How is parent informed?

d) if yes: Where?
in OSR..................1
in personal file........2
in other file (specify)
........................3

4a) Is parent/student able to withdraw consent? yes -1 no -0 — 23

b) if yes: Describe Procedure — 24 ☐

5a) Do you inform parents/students of the existance of central student records? yes -1 no -0 — 25

b) if yes: How do you inform them? — 26 ☐

c) When? — 27 ☐

6a) Do you inform parents/students of their rights regarding student records? yes -1 no -0 — 28

b) if yes: How do you inform them? — 29 ☐

c) When? — 30 ☐

...2/

Part 2: p. 2

Please complete the following by circling or filling in the correct response. Please complete part 2 with reference to central office student records

		CODING
7. a) Do you inform parents/students of what information is stored in **central** student records?	yes -1 no -0	31
b) if yes: How do you inform them?		32 ☐
c) When?		33 ☐
8. a) Do you inform parents/students of other files that may be held on them?	yes -1 no -0	34
b) if yes: How do you inform them?		35 ☐
c) When?		36 ☐
9. a) Do you retain a log of your contacts with parents/students?	yes -1 no -0	37
b) How is it retained?		38 ☐
c) where?		39 ☐
10. Do you retain a log of:		
a) requests for access to the O.S.R.?	yes -1 no -0	40
b) actual access to the OSR?	yes -1 no -0	41

Please complete the following table by listing types of persons who would have access. (include all persons including clerks, secretaries, teachers, nurses etc.)

11. WHO HAS ACCESS TO STUDENT DATA

	BEFORE it is filed 1.(During Collection)	2.ONCE it is filed	3.AFTER its use	
a) in Central Office Student Records.	42.	44.	46.	42 ☐☐ 44 ☐☐ 46 ☐☐
b) in your personal files	48.	50.	52.	48 ☐☐ 50 ☐☐ 52 ☐☐
c) in other files (specify which) __________ __________ __________	54.	56.	58.	54 ☐☐ 56 ☐☐ 58 ☐☐

...3/

CENTRAL EDUCATION OFFICE QUESTIONNAIRE

Part 2. p. 3

Please complete the following table by listing the procedures used in your school

12. HOW DOES YOUR SCHOOL SYSTEM CONTROL ACCESS TO STUDENT DATA IN CENTRAL FILES?

	BEFORE it is filed 1.(during collection)	2. ONCE it is filed	3.AFTER it has been used	
a) in Central Office Student Records	60.	62.	64.	60 ☐☐ 62 ☐☐ 64 ☐☐
b) in your personal files.	66.	68.	70.	66 ☐☐ 68 ☐☐ 70 ☐☐
c) in other files. (please specify) ________ ________ ________	72.	73.	74.	72 ☐☐ 73 ☐☐ 74 ☐☐

13. HOW DOES YOUR SCHOOL CONTROL THE ACCIDENTAL RELEASE OF STUDENT DATA?

a) During the collection of data? 75

b) When data is being filed, updated or processed? 76

c) When data is requested by unauthorized persons? 77

d) After reproduced documents, reports are no longer needed or used? 78

May 1982

Dear Respondent:

We are requesting your assistance in completing a School Questionnaire which is part of an O.I.S.E. research project on the Student Information Ramifications of Bill 82. Your Board's Director of Education and your School's Principal have approved participation. We have enclosed Information and Privacy Sheets which explain the study in more detail.

Please complete the eight-page questionnaire and return it to the Principal, sealed, in the enclosed envelope at your earliest convenience. Our researchers will visit your school shortly to gather the completed questionnaires and to conduct several other research tasks. If you need assistance filling out any parts of the questionnaire, please indicate this on the cover of the sealed envelope, along with your name (only if you need assistance), and we will meet with you privately. All data we receive from you, in written or verbal form, will be held in complete confidence and no identifying information will be stored or relayed.

We know that there are many demands on school staff members' time, and greatly appreciate your cooperation.

Sincerely,
Dr. E.H. Humphreys,
Principal Investigator

Ms. Laura Weintraub,
Project Research Officer

EH/ch

Enclosures.

Accomodating The Student Information Ramifications of Bill 82

(School Questionnaire)

Ident.

8, 9

As part of a extensive examination of the way in which student information is collected, stored, reviewed, used and disseminated in schools in Ontario, we are asking your cooperation in providing information about the way in which schools employ information on students. While the O.S.R. contains much of the data collected on students we are interested in all data that is related to, derived from or identifiable with individual students, regardless of where it is stored. The study will examine information use in schools and in central or area administrative offices. We are interested in your use of student information in order to assist you in your work with students. We appreciate your assistance.

First, we are asking you to provide us with a copy of any documents, policies, forms or outlines which you have used or developed in your school that deal with student data and its use.

Second, we are asking you to provide us with information about your own and others use of student data and information in a number of functions you carry out or in which you participate.

This questionnaire is in two parts.

Part 1 asks you about your use of information in carrying out a number of functions we believe you perform in your school. One form is provided for each function.

Part 2 asks you about the procedures and measures you take to deal with data that you now collect on students. We are interested in the way in which information is dealt with at the present time rather than how it will be dealt with after Bill 82 is fully implemented.

Part 1 contains a single page questionnaire on the four checked functions below.

☐ 01. Registration
☐ 02. Early Identification
☐ 03. Placement
☐ 04. Advising, Counselling
☐ 05. Assessment (in school)
☐ 06. Assessment (on referral)
☐ 07. Promotion
☐ 08. Program Planning
☐ 09. Home Contacts
☐ 10. Attendance
☐ 11. Discipline
☐ 12. Health Monitoring
☐ 13. Scheduling
☐ 14. Staff Supervision
☐ 15. Report to Board

We would appreciate your completing each of these before completing part 2. Other members of your staff are being asked to complete questionnaires on other functions as well. Some of these overlap and some are not dealt with in your school, but will be completed in other schools or school systems.

What is your role in your school?

☐ 01. Principal
☐ 02. Vice Principal
☐ 03. Guidance Counsellor
☐ 04. Teacher: Elementary
☐ 05. Teacher: Secondary
☐ 06. Teacher: Resource
☐ 07. Teacher: Spec. Ed.
☐ 91. Nurse
☐ 08. Other: specify

School Questionnaire

Part 1

Function______________________

1. Name the title of people who participate in the above functions and describe processes or procedures that are use. 6, 7 8, 9

a) Titles of participants	b) Description of Processes and/or Procedures

2. Identify up to 3 types of information (e.g. family background), most important for you to carry out this function, by noting each type at the top of the columns below. Please answer the following questions for each type of information separately.

a) Types of information used in function.			
b) When is it collected?			
c) List people from whom you get this information			
d) List forms or documents from which you get this information			
e) Do you retain completed documents? where?			
f) Do you store information collected for this function? where?			
g) What other uses do you make of this information?			
h) Is this information shared with others? how? when?			

Please attach a copy of each form or document listed in (d).

School Questionnaire

Part 1

Function____________________

1. Name the title of people who participate in the above functions and describe processes or procedures that are use. 6, 7 8, 9

a) Titles of participants b) Description of Processes and/or Procedures

2. Identify up to 3 types of information (e.g. family background), most important for you to carry out this function, by noting each type at the top of the columns below. Please answer the following questions for each type of information separately.

a) Types of information used in function.			
b) When is it collected?			
c) List people from whom you get this information			
d) List forms or documents from which you get this information			
e) Do you retain completed documents? where?			
f) Do you store information collected for this function? where?			
g) What other uses do you make of this information?			
h) Is this information shared with others? how? when?			

Please attach a copy of each form or document listed in (d).

School Questionnaire

Part 1

Function______________________

1. Name the title of people who participate in the above functions and describe processes or procedures that are use.

6, 7

8, 9

a) Titles of participants b) Description of Processes and/or Procedures

a) Types of information used in function.			
b) When is it collected?			
c) List people from whom you get this information			
d) List forms or documents from which you get this information			
e) Do you retain completed documents? where?			
f) Do you store information collected for this function? where?			
g) What other uses do you make of this information?			
h) Is this information shared with others? how? when?			

2. Identify up to 3 types of information (e.g. family background), most important for you to carry out this function, by noting each type at the top of the columns below. Please answer the following questions for each type of information separately.

Please attach a copy of each form or document listed in (d).

School Questionnaire

Part 1

Function_______________________

1. Name the title of people who participate in the above functions and describe processes or procedures that are use. 6, 7 8, 9

a) Titles of participants b) Description of Processes and/or Procedures

2. Identify up to 3 types of information (e.g. family background), most important for you to carry out this function, by noting each type at the top of the columns below. Please answer the following questions for each type of information separately.

a) Types of information used in function.			
b) When is it collected?			
c) List people from whom you get this information			
d) List forms or documents from which you get this information			
e) Do you retain completed documents? where?			
f) Do you store information collected for this function? where?			
g) What other uses do you make of this information?			
h) Is this information shared with others? how? when?			

Please attach a copy of each form or document listed in (d).

School Questionnaire

Part 2

Part 2: p. 1
Please complete the following by circling or filling in the correct response. ☐☐☐☐☐
☐☐

	CODING
1a) Is parent/student CONSENT obtained prior to:	
COLLECTING DATA? . . . . yes -1 no -0	11
b) if yes: How is consent collected? e) if no: Is parent informed?	12
written -1 verbal -2 yes -5 no -6	
c) Do you retain consent? yes -1 no -0 f) How is parent informed?	13 ☐
d) if yes: where? in OSR ....1 in personal file ......2 in other file (specify) 3	14
2a) Is parent/student CONSENT obtained prior to:	
STORING DATA? . . . . .yes -1 no -0	15
b) if yes: How is consent collected: e) if no: Is parent informed?	16
written -1 verbal -2 yes -5 no -6	
c) Do you retain consent? yes -1 no -0 f) How is parent informed?	17 ☐
d) if yes: where? in OSR ....1 in personal file......2 in other file (specify) 3	18
3a) Is parent/student CONSENT obtained prior to:	
SHARING DATA? . . . . yes -1 no -0	19
b) if yes: How is consent collected: e) if no: Is parent informed?	20
written -1 verbal -2 yes -5 no -6	21 ☐
c) Do you retain consent? yes -1 no -0 f) How is parent informed?	22
d) if yes: Where? in OSR..................1 in personal file........2 in other file (specify) 3	
4a) Is parent/student able to withdraw consent? yes -1 no -0	
b) if yes: Describe Procedure	23
	24 ☐
5a) Do you inform parents/students of the existance of the O.S.R.? yes -1 no -0	25
b) if yes: How do you inform them?	26 ☐
c) When?	27 ☐
6a) Do you inform parents/students of their rights regarding the O.S.R.? yes -1 no -0	28
b) if yes: How do you inform them?	29 ☐
c) When?	30 ☐

...2/

School Questionnaire

Part 2 (continued)

		CODING
7. a) Do you inform parents/students of what information is stored in the OSR?	yes -1 no -0	31
b) if yes: How do you inform them?		32 ☐
c) When?		33 ☐
8. a) Do you inform parents/students of other files that may be held on them?	yes -1 no -0	34
b) if yes: How do you inform them?		35 ☐
c) When?		36 ☐
9. a) Do you retain a log of your contacts with parents/students?	yes -1 no -0	37
b) How is it retained?		38 ☐
c) where?		39 ☐
10. Do you retain a log of:		
a) requests for access to the O.S.R.?	yes -1 no -0	40
b) actual access to the OSR?	yes -1 no -0	41

Please complete the following table by listing types of persons who would have access. (include all persons including clerks, secretaries, teachers, nurses etc.)

11. WHO HAS ACCESS TO STUDENT DATA

	BEFORE it is filed 1.(During Collection)	2.ONCE it is filed	3.AFTER its use	
a) in OSRs	42.	44.	46.	42 ☐☐ 44 ☐☐ 46 ☐☐
b) in your personal files	48.	50.	52.	48 ☐☐ 50 ☐☐ 52 ☐☐
c) in other files (specify which) __________ __________ __________	54.	56.	58.	54 ☐☐ 56 ☐☐ 58 ☐☐

...3/

School Questionnaire

Part 2 (continued)

Please complete the following table by listing the procedures used in your school

12. HOW DOES YOUR SCHOOL CONTROL ACCESS TO STUDENT DATA

	1. BEFORE it is filed (during collection)	2. ONCE it is filed	3. AFTER it has been used	
a) in OSRs	60.	62.	64.	60 ☐☐ 62 ☐☐ 64 ☐☐
b) in your personal files.	66.	68.	70.	66 ☐☐ 68 ☐☐ 70 ☐☐
c) in other files. (please specify) ______ ______ ______	72.	73.	74.	72 ☐☐ 73 ☐☐ 74 ☐☐

13. HOW DOES YOUR SCHOOL CONTROL THE ACCIDENTAL RELEASE OF STUDENT DATA?

a) During the collection of data? 75

b) When data is being filed, updated or processed? 76

c) When data is requested by unauthorized persons? 77

d) After reproduced documents, reports are no longer needed or used? 78

14. PLEASE LIST ALL SCHOOL POLICY DOCUMENTS, MEMORANDA AND FORMS THAT ARE EMPLOYED BY YOUR SCHOOL TO REGULATE OR COLLECT DATA ON STUDENTS

LIST	CHECK IF YOU HAVE ATTACHED A COPY?
1. ____________________	yes ___
2. ____________________	yes ___
3. ____________________	yes ___
4. ____________________	yes ___
5. ____________________	yes ___
6. ____________________	yes ___
7. ____________________	yes ___
8. ____________________	yes ___

Appendix D

Appendix D(i)

STUDENT RECORDS-TYPES OF INFORMATION ON OSR
TALLY SHEET No. 1

Student I.D. # ☐☐☐☐☐
Card # ☐☐ 8, 9
Student Gr.Code ☐ 1 0

Info. Category on OSR	n.a.	yes	Card 01
			Col #
Part A --Identification			
Sex		☐	11
St. no./Board no./other no.		☐	12
S.I.N.		☐	13
Date of birth		☐	14
Verification of d.o.b.		☐	15
Initial		☐	16
Name change	☐	☐	17
Other		☐	18
Part B - Schools			
Prim. Names of sch., brd & T.C.		☐	19
Entry date		☐	20
Completion date		☐	21
Achi. Form No.		☐	22
Signature		☐	23
Jr. Names of sch., brd. & T.C.		☐	24
Entry date		☐	25
Completion date		☐	26
Achi. Form No.		☐	27
Signature		☐	28
Inter. Names of sch.,brd. & T.C.		☐	29
Entry date		☐	30
Completion date		☐	31
Achi. Form No.		☐	32
Signature		☐	33
Sec. Names of sch., brd. & T.C.		☐	34
Entry date		☐	35
Completion date		☐	36
Achi. Form No.		☐	37
Signature		☐	38
Part C- Sec./Sch. Progress summary			
Courses		☐	39
Credits		☐	40
Dates		☐	41
Accm'd credits		☐	42

Info. Category on OSR	n.a.	yes	Card 01 cont'd
Part D--Family			
Father;		☐	43
deceased		☐	44
Mother;		☐	45
deceased		☐	46
guardian;	☐	☐	47
deceased	☐	☐	48
Part E- Health info.			
Condition		☐	49
Recommendation		☐	50
Review		☐	51
Dated		☐	52
Part F- Photo(s)			
Photo		☐	53
Dated	☐	☐	54
Currency (1981,82)	☐	☐	55
Part G- Extra Curr: Sch. activities			
Activity		☐	56
Dated	☐	☐	57
Currency (1981,82)	☐	☐	58
Part H- Additional information			
Add. info.		☐	59
Dated	☐	☐	60
Add. info. in folder		☐	61
Part I- Sp. achievements in Sch.			
Sp. achi		☐	62
Dated	☐	☐	63
Currency (1981,82)	☐	☐	64
Part J- Retirement			
Dated		☐	65
Address		☐	66
Part-K Follow-up info (applies to sch. leavers only)			
Entry	☐	☐	67
Dated	☐	☐	68

Initials ______ Date ______

STUDENT RECORDS--TYPES OF INFORMATION INSIDE OSR D(i)p.2

TALLY SHEET No. 2

Info. Category Inside OSR	no.	yes	Card 01 cont'd col#
A. Registration forms & transfers			
No. of registration forms		☐ *	69
Number dated	☐	☐ *	70
No. of transfer Forms		☐ *	71
Number dated	☐	☐ *	72
B & C Achievement forms & report cards			
Number of forms		☐ *	73
Number dated	☐	☐ *	74
Time tables (sec.)			
Inserted		☐	75
Currency (81, 82)		☐	76
Prog./option change (sec.)			
Inserted		☐	77
Dated	☐	☐	78
Consent(write code#)	☐	☐	79
none - 0 student -2	☐☐	☐☐	
parent -1 both -3	☐☐		9.9
	☐		10
Credit notations (sec.)			
Notice of promotion m'tg		☐	11
Credit attainment		☐	12
Possibility of failure		☐	13
Recording of failure		☐	14

Remarks re: family and/or health data:

Info. Category Inside OSR	no.	yes	Card 02 Cont'd Col.#
D. Family data			
Address of parent/guardian		☐	15
Country of birth		☐	16
Date of entry to Canada	☐	☐	17
Living with both parents		☐	18
If no, with whom	☐	☐	19
Change of family status	☐	☐	20
Custody notation	☐	☐	21
Father: Name		☐	22
Where employed	☐	☐	23
Business phone	☐	☐	24
Mother: Name		☐	25
Where employed	☐	☐	26
Business phone	☐	☐	27
Guardian: Name		☐	28
Where employed	☐	☐	29
Business phone	☐	☐	30
Number of siblings		☐	31
Siblings age	☐	☐	32
Property ownership status		☐	33
Religion (R.C./not R.C.)		☐	34
If R.C. rent/taxes support P.S.		☐	35
Consent to file family info. in OSR		☐	36
Other(s) specify		☐	37
			38
E. Health data notations:			
Medical condition(s)		☐	39
Treatment(s)		☐	40
Recommendation(s)		☐	41
Alerts		☐	42
References		☐	43
Follow-up		☐	44
Consent to file above in OSR		☐	45
Other(s) specify		☐	46
—			47

* Write the total number of forms in the box beside each of these items e.g., if there are two forms, it should be indicated as 2

STUDENT RECORDS-TYPES OF INFORMATION INSIDE OSR
TALLY SHEET No. 3

Info. Category Inside OSR	n.a.	yes	Card 02 Cont'd Col.#
G. Co-curricular sch. activities			
Number of inserts............		☐ *	48
Number dated..............	☐	☐ *	49
H. Additional information			
Early school leaving..........		☐	50
Consent re. above..........	☐	☐	51
Discipline problem............		☐	52
Action taken re. above......	☐	☐	53
Home contact re. discip.....	☐	☐	54
Suspension....................		☐	55
Home contact re. susp.......	☐	☐	56
Attend. pattern sheet.........		☐	57
Consent to file above in OSR	☐	☐	58
Other(s) specify................			59
....		☐	60

Info. Category Inside OSR	n.a.	yes	Card 02 Cont'd Col. #
I. Special achievements in school			
Number of documents re. awards, scholarships won.....		☐ *	61
Number dated.............	☐	☐ *	62
L. Guidance Notations:			
Personal.....................		☐	63
Academic/cousre related......		☐	64
Vocational/Career		☐	65
Consent to file in OSR.....	☐	☐	66
Consent to share info with (write code#).......	☐	☐	67
none..................-0 Post secondary inst....-1 Employer..............-2 Other- Specify ....-3			
M. French instruction card			68
Inserted.....................		☐	
Dated....................	☐	☐	69

CARD ☐☐☐☐ 8,9
☐ 10

Referrals

Referred to:	by:	for purpose of:	dated
1.			
2.			
3.			
4.			
5.			
6.			
7.			

Remarks: ____________________

---

* Write the total number of inserts/documents in the box beside each of these items.

D(i)p.4

STUDENT RECORDS-TYPES OF INFORMATION INSIDE OSR
TALLY SHEET No. 4

Col(s)

Assessment(s) & Related Consent:

a) List of standardized tests & related info. inserted in OSR:

	Name of test	Date	Filed*	Results Filed
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

b) Consent for psych. assessment ________ ________

Consent for access to OSR by Psych staff ________ ________

Consent to file above (*) in OSR ________ ________

Assessment Reports by consent of File and Category of Info. (up to 5 categories) ☐☐☐☐☐ 8 9 10

1. Psych. assessment report.

Filed. ☐ Dated. ☐ Consent. ☐

Categories of info: (up to 5)

1.________
2.________
3.________
4.________
5.________

2. Reading assessment report filed

Filed. ☐ Dated. ☐ Consent. ☐

Categories of info.

1.________
2.________
3.________
4.________
5.________

3. Speech & lang. assessment report.

Filed. ☐ Dated. ☐ Consent. ☐

Categories of info: (up to 5)

1. ________
2. ________
3. ________
4. ________
5. ________

4. Auditory & vision assessment report:

Filed. ☐ Dated. ☐ Consent. ☐

Categories of info:

1. ________
2. ________
3. ________
4. ________
5. ________

D(i)p.5

STUDENT RECORDS--TYPES OF INFORMATION INSIDE NON-OSR
FILES KEPT BY SCHOOL PERSONNEL --TALLY SHEET #5

Info. Category.	Prin.	V.Prin.	Guid.	Col(s)
Attendance/late	☐	☐	☐	
Discipline(non-sus)	☐	☐	☐	
Family	☐	☐	☐	
Emergencies	☐	☐	☐	
Personal	☐	☐	☐	
Conferences	☐	☐	☐	
Consent	☐	☐	☐	
Legal/cust/death	☐	☐	☐	
other (specify): ______	☐	☐	☐	
Health				☐☐☐☐☐ ☐☐☐ 8,9 ☐ 10
Alerts	☐	☐	☐	
Recommendations	☐	☐	☐	
Follow-up	☐	☐	☐	
Other(specify): ______	☐	☐	☐	
Counselling				
Personal	☐	☐	☐	
Academic	☐	☐	☐	
Career/voc'l	☐	☐	☐	
Referrals	☐	☐	☐	
Other (specify): ______ ______	☐	☐	☐	

Info. Category.	Prin.	V.Prin.	Guid.	Col(s)
Assessments				
Psych. ed.	☐	☐	☐	
Speech	☐	☐	☐	
Soc. Work	☐	☐	☐	
Ext. agencies	☐	☐	☐	
Testing (types): ______	☐	☐	☐	
Special Programs				
Reg. class	☐	☐	☐	
Withdrawl/resource	☐	☐	☐	
Seg. class	☐	☐	☐	
Seg. school	☐	☐	☐	
Other (e.g. gifted, ESL) ______ ______	☐	☐	☐	
Ext. Agen. Consult.	☐	☐	☐	
Achievement Awards	☐	☐	☐	
Early School Leaving	☐	☐	☐	
Suspension	☐	☐	☐	
Other: ______ ______ ______	☐	☐	☐	

Appendix D(ii)

STUDENT RECORDS--TYPES OF INFORMATION INSIDE FILES MAINTAINED AT THE CENTRAL AND/OR FIELD OFFICES

I.D.# ☐☐☐☐☐
Card # ☐☐ 8 9
Grade # ☐ 10

Info. Category Inside Special Files	Yes	Card # Col#
Attendance/Social Work		
Referral form....................	☐	11
Consent for OSR access...........	☐	12
Assessment report................	☐	13
Follow up notes..................	☐	14
Early School-Leave application....	☐	15
Early/School-Leave report.........	☐	16
Consent for exchange of info.	☐	17
Consent for release of info.......	☐	18
Reports from & correspondence with agencies..................	☐	19
Suspension letters from sch to parents....................	☐	20
Other (specify)..................	☐	21
Special Education		
Consent for placement/demission...	☐	22
S.E.R.T. follow-up notes..........	☐	23
Speech teacher reports............	☐	24
Consent for exchange of info......	☐	25

Info. Category Inside Special Files	Yes	Card # Col #
Special Education Con'td		
Consent for release of info.......	☐	26
Reports, corresp. with agencies, ministries....................	☐	27
Early Id. Prog. profile of sp. ed. students..................	☐	28
Other (specify)..................	☐	29
Psychology		
Referral form.....................	☐	30
Assessment report.................	☐	31
Follow-up Notes...................	☐	32
Consent for exchange of info......	☐	33
Consent for release of info.......	☐	34
Reports from & Correspondence with agencies..................	☐	35
Consent for OSR access............	☐	36
Consent for Psych. assess'mt......	☐	37
Standardized test raw Scores......	☐	38
Other (specify)..................	☐	39

List of Standardized tests & related info. inserted in files generated by or directed by Psychology section of the department of Special Services.

	Name of test	Date	Filed	Results filed
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				